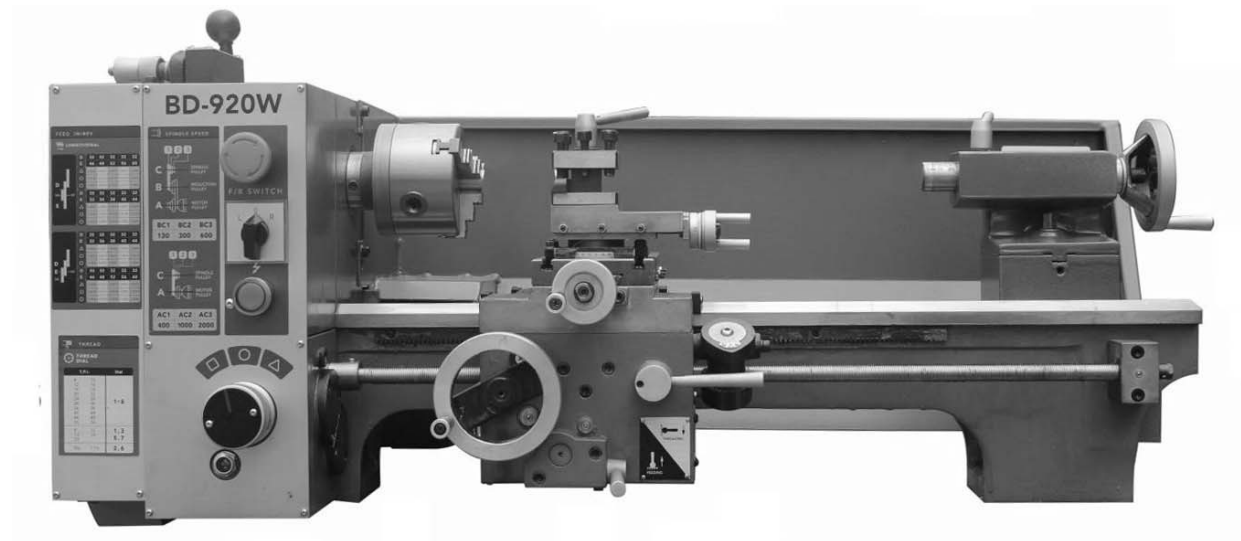




Operating Instructions and Parts Manual

9 x 20-inch Belt Drive Bench Lathe

Model BD-920W



JET
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LaVergne, Tennessee 37086
Ph.: 800-274-6848
www.jettools.com

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1.0 Warranty and service

JET warrants every product it sells against manufacturers' defects. If one of our tools needs service or repair, please contact Technical Service by calling 1-800-274-6846, 8AM to 5PM CST, Monday through Friday.

Warranty Period

The general warranty lasts for the time period specified in the literature included with your product or on the official JET branded website.

- JET products carry a limited warranty which varies in duration based upon the product. (See chart below)
- Accessories carry a limited warranty of one year from the date of receipt.
- Consumable items are defined as expendable parts or accessories expected to become inoperable within a reasonable amount of use and are covered by a 90 day limited warranty against manufacturer's defects.

Who is Covered

This warranty covers only the initial purchaser of the product from the date of delivery.

What is Covered

This warranty covers any defects in workmanship or materials subject to the limitations stated below. This warranty does not cover failures due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair, alterations or lack of maintenance. JET woodworking machinery is designed to be used with Wood. Use of these machines in the processing of metal, plastics, or other materials outside recommended guidelines may void the warranty. The exceptions are acrylics and other natural items that are made specifically for wood turning.

Warranty Limitations

Woodworking products with a Five Year Warranty that are used for commercial or industrial purposes default to a Two Year Warranty. Please contact Technical Service at 1-800-274-6846 for further clarification.

How to Get Technical Support

Please contact Technical Service by calling 1-800-274-6846. **Please note that you will be asked to provide proof of initial purchase when calling.** If a product requires further inspection, the Technical Service representative will explain and assist with any additional action needed. JET has Authorized Service Centers located throughout the United States. For the name of an Authorized Service Center in your area call 1-800-274-6846 or use the Service Center Locator on the JET website.

More Information

JET is constantly adding new products. For complete, up-to-date product information, check with your local distributor or visit the JET website.

How State Law Applies

This warranty gives you specific legal rights, subject to applicable state law.

Limitations on This Warranty

JET LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

JET SHALL IN NO EVENT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY, OR FOR INCIDENTAL, CONTINGENT, SPECIAL, OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCTS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

JET sells through distributors only. The specifications listed in JET printed materials and on official JET website are given as general information and are not binding. JET reserves the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever. JET® branded products are not sold in Canada by JPW Industries, Inc.

Product Listing with Warranty Period

90 Days – Parts; Consumable items
1 Year – Motors; Machine Accessories
2 Year – Metalworking Machinery; Electric Hoists, Electric Hoist Accessories; Woodworking Machinery used for industrial or commercial purposes
5 Year – Woodworking Machinery
Limited Lifetime – JET Parallel clamps; VOLT Series Electric Hoists; Manual Hoists; Manual Hoist Accessories; Shop Tools; Warehouse & Dock products; Hand Tools; Air Tools

NOTE: JET is a division of JPW Industries, Inc. References in this document to JET also apply to JPW Industries, Inc., or any of its successors in interest to the JET brand.

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3.0 Safety warnings

3.1 Grounding Instructions

1. All grounded, cord-connected tools:

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.

Repair or replace damaged or worn cord immediately.

2. Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating less than 150 volts:

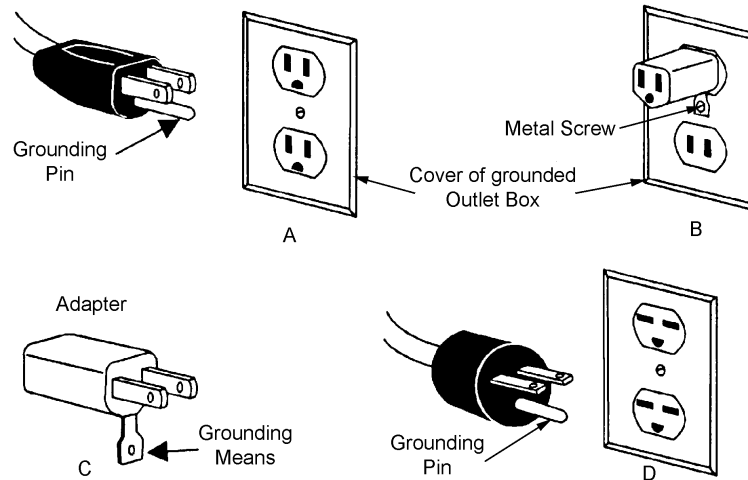
This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Sketch A. The tool has a grounding plug that looks like the plug illustrated in Sketch A. A temporary adapter, which looks like the adapter illustrated in Sketches B and C, may be used to connect this plug to a 2-pole receptacle as shown in Sketch B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. (This adapter is not permitted in Canada) The green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

3. Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating between 150 - 250 volts, inclusive:

This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Sketch D. The tool has a grounding plug that looks like the plug illustrated in Sketch D. Make sure the tool is connected to an outlet having the same configuration as the plug. No adapter is available or should be used with this tool. If the tool must be reconnected for use on a different type of electric circuit, the reconnection should be made by qualified service personnel; and after reconnection, the tool should comply with all local codes and ordinances.

4. Permanently connected tools:

This tool should be connected to a grounded metal permanent wiring system; or to a system having an equipment-grounding conductor.



3.2 For all tools as applicable

1. READ AND UNDERSTAND the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
2. Replace the warning labels if they become obscured or removed.
3. This lathe is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a lathe, do not use until proper training and knowledge have been obtained.
4. Do not use this lathe for other than its intended use. If used for other purposes, JET disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
5. KEEP GUARDS IN PLACE and in working order.
6. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
7. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
8. DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
9. KEEP CHILDREN AWAY. All visitors should be kept safe distance from work area.
10. MAKE WORKSHOP KID PROOF with padlocks, master switches, or by removing starter keys.
11. DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was designed.
12. USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.
13. WEAR PROPER APPAREL. Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
14. ALWAYS USE SAFETY GLASSES. Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
15. SECURE WORK. Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
16. DON'T OVERREACH. Keep proper footing and balance at all times.
17. MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
18. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
19. DISCONNECT TOOLS before servicing; when changing accessories, such as blades, bits, cutters, and the like.
20. REDUCE THE RISK OF UNINTENTIONAL STARTING. Make sure switch is in off position before plugging in.

21. **USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.
22. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
23. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function - check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
24. **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
25. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** Don't leave tool until it comes to a complete stop.
26. Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - Lead from lead based paint
 - Crystalline silica from bricks and cement and other masonry products, and
 - Arsenic and chromium from chemically-treated lumber.

Your risk from those exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well-ventilated area, and work with approved safety equipment, such as those dust masks that are specifically designed to filter out microscopic particles
27. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
28. Tighten all locks before operating.
29. **USE PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table 1 shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

Ampere Rating		Volts	Total length of cord in feet			
		120 V	25 ft.	50 ft.	100 ft.	150 ft.
		240 V	50 ft.	100 ft.	200 ft.	300 ft.
More than	Not more than	AWG				
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not recommended	
Only the applicable parts of the Table need to be included. For instance, a 120-volt product need not include the 240-volt heading.						

Table 1
Minimum Gage for Cord

4.0 Introduction

This manual is provided by JET covering the safe operation and maintenance procedures for a JET Model BD-920W Bench Lathe. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. This machine has been designed and constructed to provide consistent, long-term operation if used in accordance with instructions set forth in this manual. If there are any questions or comments, please contact either your local supplier or JET. JET can also be reached at our web site: www.jettools.com.

5.0 Specifications

Model Number.....	BD-920W
Stock Number	321376
Capacities:	
Swing Over Bed	9"
Swing Over Cross Slide	5-5/16"
Distance Between Centers.....	20"
Headstock:	
Hole Through Spindle	20mm (25/32")
Spindle Nose	1-1/2" x 8 T.P.I
Taper in Spindle	MT-3
Spindle Bearing Type	Tapered Roller
Number of Spindle Speeds	6
Range of Spindle Speeds	130-2000 RPM
Gear Box:	
Number of Longitudinal Feeds	60
Range of Longitudinal Feeds	0.0006" – 0.037"
Number of Inch Threads	30
Range of Inch Threads.....	8-60 T.P.I.
Number of Metric Threads	18
Range of Metric Threads.....	0.4 – 3.5
Compound and Carriage:	
Toolpost Type	single and 4-Way
Maximum Tool Size.....	1/2" x 1/2"
Maximum Compound Slide Travel	1-7/8"
Maximum Cross Slide Travel	5"
Maximum Carriage Travel.....	16"
Tailstock:	
Tailstock Spindle Travel	1-9/16"
Diameter of Tailstock Spindle	1-1/16"
Taper in Tailstock Spindle	MT-2
Miscellaneous:	
Steady Rest Capacity.....	1/4" – 1-7/8"
Follow Rest Capacity	1/4" – 1-1/8"
Length of Bed.....	32"
Width of Bed.....	4-1/2"
Height of Bed	6-5/8"
Overall Dimensions	40"L x 21"W x 20"H
Main Motor	TEFC, 3/4HP, 1PH, 115V, 60Hz
Noise emission (idle).....	75 dB
Net Weight (approx.)	254 lbs.
Shipping Weight (approx.).....	300 lbs.

The above specifications were current at the time this manual was published, but because of our policy of continuous improvement, JET reserves the right to change specifications at any time and without prior notice, without incurring obligations.

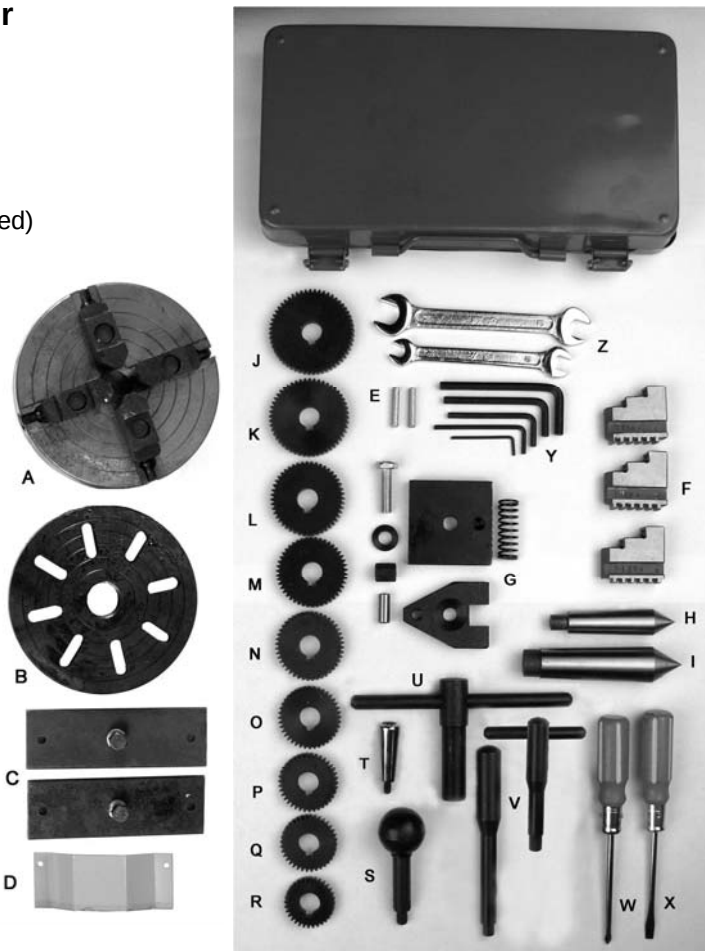
6.0 Unpacking

Open shipping container and check for shipping damage; report any damage immediately to your distributor and shipping agent. Do not discard any shipping material until the Lathe is assembled and running properly. Compare the contents of your container with the following parts list to make sure all parts are intact. Missing parts, if any, should be reported to your distributor. Read the instruction manual thoroughly for assembly, maintenance and safety instructions.

6.1 Contents of shipping container

Referring to Figure 1:

- 1 Lathe (not shown)
- 1 6" Four-Jaw Independent Chuck (A)
- 1 Faceplate (B)
- 2 Lifting Plates (C)
- 1 Cover (D)
- 1 4" Three-Jaw Universal Chuck (pre-mounted)
- 1 Four Way Tool Post (pre-mounted)
- 1 Steady Rest (pre-mounted)
- 1 Follow Rest (pre-mounted)
- 1 Operator's Manual (not shown)
- 1 Warranty Card (not shown)
- 2 Shear Pins* (E)
- 3 Chuck Jaws (F)
- 1 Single Tool Post Assembly* (G)
- 1 MT-2 Center* (H)
- 1 MT-3 Center* (I)
- 1 56T Gear* (J)
- 1 52T Gear* (K)
- 1 48T Gear* (L)
- 1 46T Gear* (M)
- 1 44T Gear* (N)
- 1 40T Gear* (O)
- 1 38T Gear* (P)
- 1 36T Gear* (Q)
- 1 32T Gear* (R)
- 1 Tension Roller Lever (S)
- 1 Handle (T)
- 1 Female Chuck Key* (U)
- 2 Male Chuck Keys (V)
- 1 #1 Cross Point Screwdriver* (W)
- 1 #1 Flat Blade Screwdriver* (X)
- 1 5pc Hex Wrench Set (Y)
- 2 Open End Wrenches – 8/10mm, 12/14mm (Z)



* parts marked with an asterisk are included in the tool box, stock no. BD920W-TB

CAUTION

The three jaw chuck and the face plate have a set screw on their flanges that secures them to the threaded spindle. Before removing the three jaw chuck or the faceplate, remove the set screw completely from the flange. Failure to remove the set screw may cause damage to the threads on the spindle. When installing either the jaw chuck or the faceplate, tighten the set screw firmly to prevent the chuck or the faceplate from coming off the spindle during operation.

⚠WARNING

Read and understand the entire contents of this manual before attempting set-up or operation! Failure to comply may cause serious injury.

7.0 Set up and preparation for operation

To avoid twisting the bed, make sure the location to which the lathe will be moved is absolutely flat and level. Place a machinist's level on the bed ways and check for level side-to-side and front to rear. If stand mounted, the stand must be fastened to the floor. (An optional JET stand is available for this lathe – order stock no. 321374.)

Remove rust protectant from all surfaces with kerosene, diesel oil, or a mild solvent. Do not use gasoline, paint thinner, or lacquer thinner, as these may damage painted surfaces. After cleaning, wipe with a clean, dry cloth and cover all machined surfaces with a light film of machine oil.

Swing open the drive assembly end guard, and mount the cover to the bottom of the guard using three screws. (See Drive Assembly Exploded View, index no. 11, for clarification.)

Carefully read the grounding instructions on pages 4 and 5. It is recommended that the BD920W Lathe be connected to a dedicated, minimum 25 amp circuit with a 25 amp circuit breaker or time delay fuse. **Local codes take precedence over recommendations.**

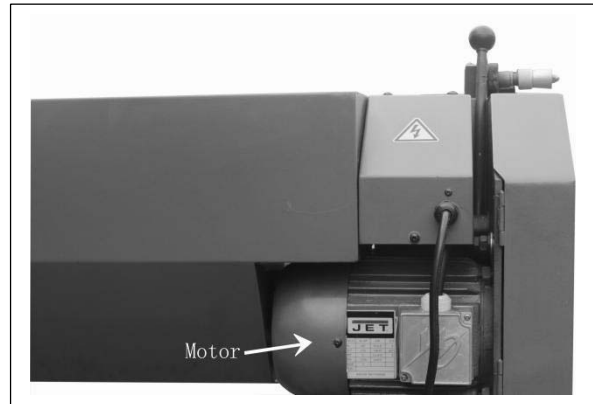


Figure 2

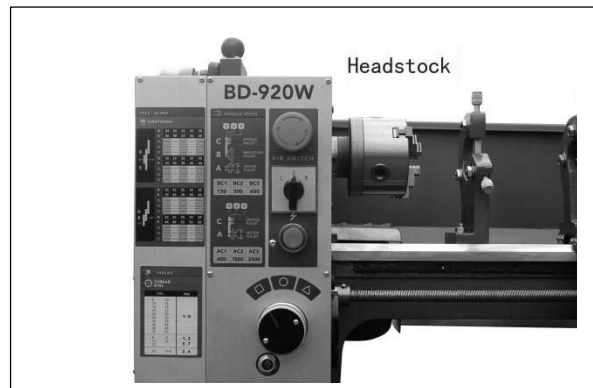


Figure 3

8.0 General description

8.1 Lathe bed

The Lathe bed is made of high-grade iron. By combining high cheeks with strong cross ribs, a bed of low vibration and rigidity is produced. The main motor is mounted to the rear of the bed (Figure 2).

8.2 Headstock

The headstock (Figure 3) is cast from high grade, low vibration cast iron. It is bolted to the bed with four screws and uses four adjusting screws for alignment. In the head the large main spindle is mounted on two precision taper roller bearings. The hollow spindle is a Morse taper No.3 with a 7/8" bore

A quick change of the belt can be accomplished by easing the tension on the idler (Figure 4).

To protect the machine against accidental damage, a clutch is fitted to the reduction pulley at the 130 R.P.M. speed.

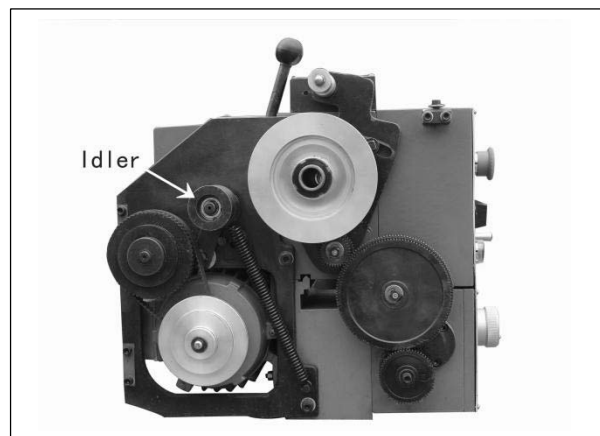


Figure 4

8.3 Carriage

The carriage (Figure 5) is made from high-grade cast iron. The sliding parts are smooth ground. They fit the V on the bed without play. The lower sliding parts can be easily and simply adjusted. The cross slide is mounted on the carriage and moves on a dovetail. Play in the cross slide may be adjusted with the gibs.

Move the cross slide using the conveniently positioned handwheel (Figure 5). There is a graduated collar on the handwheel. One graduated mark equals 0.0254 millimeters or 0.001 inches.

The top slide, mounted on the cross slide, can be rotated 360°. The top slide and the cross slide travel in dovetailed slides and have gibs, adjustable nuts, and graduated collars.

A four-way tool post is fitted on the top slide. The four-way tool post can be converted to a single tool holder with parts enclosed in the toolbox (Figure 6). See *parts breakdown on page 38 for assembly of tool holder*.

For accurate facing operations, the carriage can be locked by tightening the hex socket cap screw (A, Figure 7).

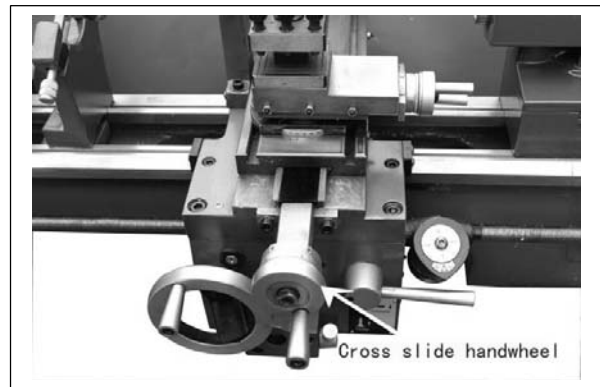


Figure 5

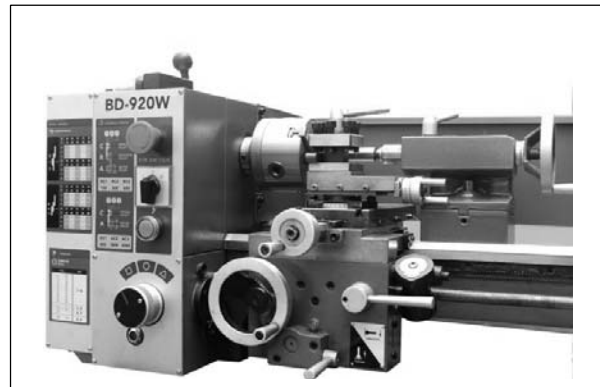


Figure 6

8.4 Apron

The apron (Figure 8) is mounted on the bed. A half nut is fitted to the apron. The half nut gibs can be adjusted from the outside.

The half nut is engaged by the half nut lever.

The rack mounted on the bed, and a pinion operated by a handwheel on the carriage, allow for quick travel of the apron.

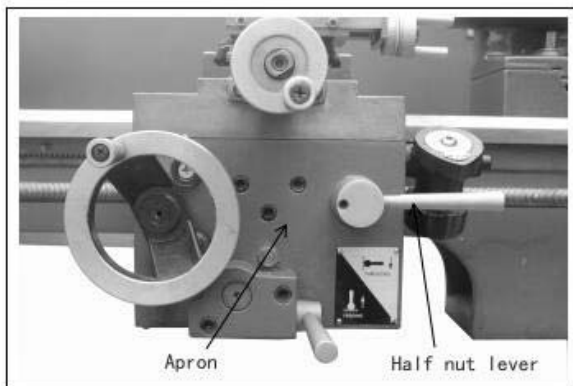


Figure 8

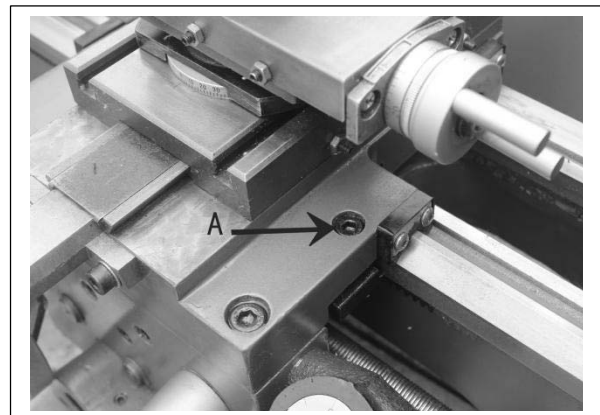


Figure 7

8.5 Tailstock

The tailstock (Figure 9) slides on a V-way and can be clamped at any location. The tailstock has a heavy duty spindle with a Morse taper No.2 socket and a graduated scale. The spindle can be clamped at any location with a clamping lever. The spindle is moved with a handwheel at the end of the tailstock.

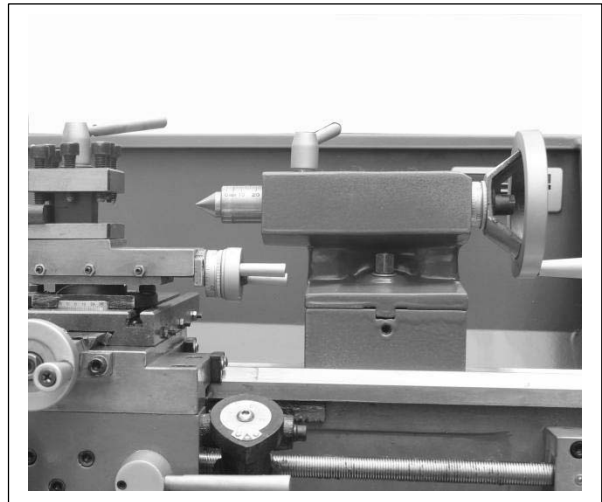


Figure 9

8.6 Lead screw

The lead screw (Figure 10) is mounted on the front of the machine bed. It is connected to the gearbox at the left for automatic feed and is supported by a bearing on both ends. The nut and setscrew on the right end are designed to take up play on the leadscrew.



Figure 10

8.7 Gear box

The gearbox (Figure 11) is made from high quality cast iron and is mounted on the left side of the machine bed. The motor drives through handle changeable speeds. Always raise idler to the disengaged position when changing speeds (Figure 4).

8.8 Drive and electrical equipment

The main drive is provided by a single phase, A.C. motor mounted on the rear of the lathe bed. (B, Figure 11)

The forward-reverse switch, emergency stop switch and power light (C, Figure 11) are mounted on the front of the electrical box. The motor condenser is also contained in this box.

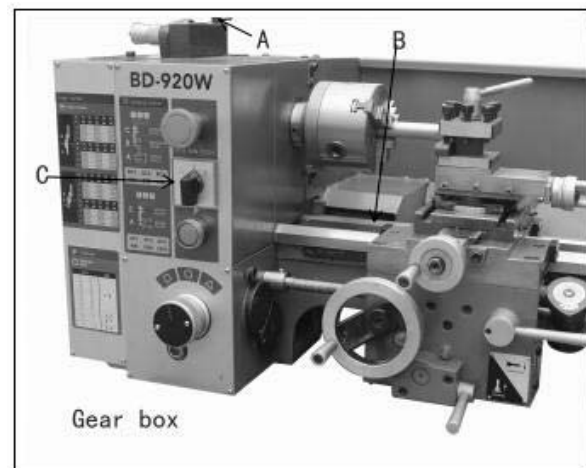


Figure 11

9.0 Controls

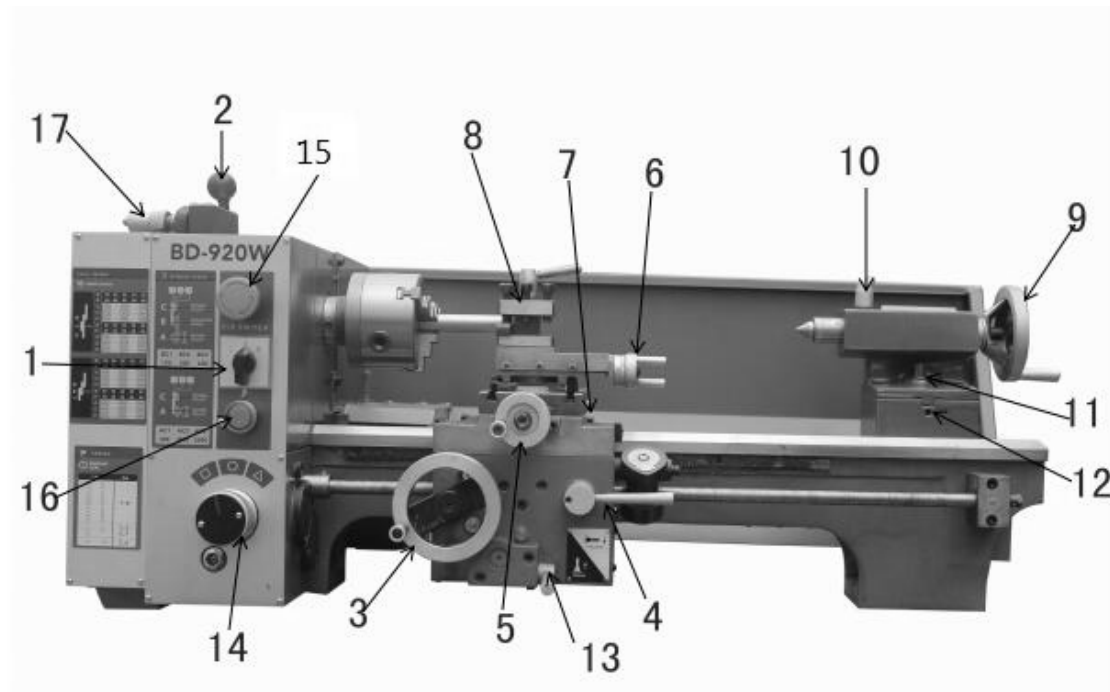


Figure 12

- | | |
|----------------------------------|--------------------------------------|
| 1. Forward/Reverse Switch | 10. Tailstock Spindle Clamping Lever |
| 2. V-Belt Tension Lever | 11. Tailstock Locking Screw |
| 3. Longitudinal Travel Handwheel | 12. Tailstock Off-Set Adjustment |
| 4. Half-Nut Lever | 13. Automatic Feed Lever |
| 5. Cross Slide Handwheel | 14. Gear Box Quick Change Lever |
| 6. Top Slide Handwheel | 15. Emergency switch |
| 7. Longitudinal Lock Screw | 16. Power Light |
| 8. Tool Post | 17. Left/right Screw Lever |
| 9. Tailstock Spindle Handwheel | |

10.0 Operation

10.1 Tool set-up

The cutting angle is correct when the cutting edge is in line with the center axis of the work piece. The correct height of the tool can be achieved by comparing the tool point with the point of the center mounted in the tailstock. The correct tool height can be obtained by using shims under the tool (Figure 13).

When turning, the tool has a tendency to bend under pressure. For best results, tool overhang should be kept to a minimum of 3/8" or less.

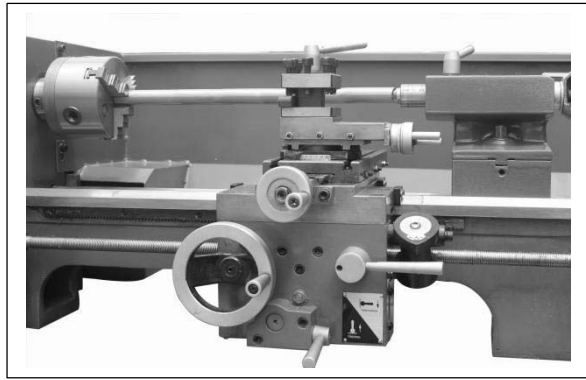


Figure 13

10.2 Manual turning

Apron travel, cross travel, and top slide handwheels can be operated for longitudinal or cross feeding (Figure 14).

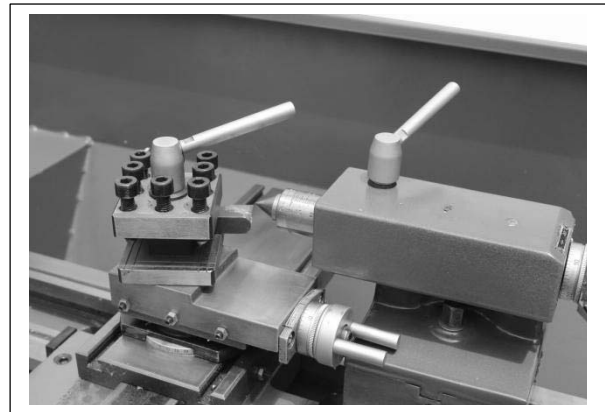


Figure 14

10.3 Longitudinal turning with auto-feed

To use automatic feed, establish the gear combinations as needed, then move lever (A, Figure 15) to engage feed.

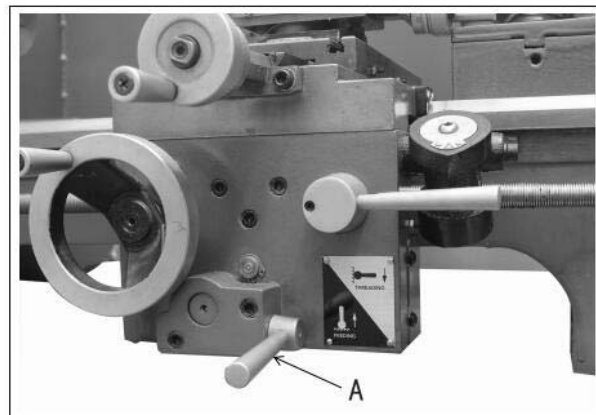


Figure 15

10.4 Taper turning using tailstock off-set

Offsetting the tailstock can turn work to side angle of 5° . The angle depends on the length of the workpiece.

To off-set the tailstock, loosen locking screw (1, Figure 16) loosen the front adjusting screw (2) and take up the same amount by tightening the rear adjusting screw (3) until the desired taper has been reached. Tighten the front screw to lock the tailstock in position. The workpiece must be held between two centers and driven by a faceplate and driver dog.

After taper turning, the tailstock should be returned to its original position. Turning a test piece with constant adjustment until the piece is absolutely true checks the zero position of the tailstock.

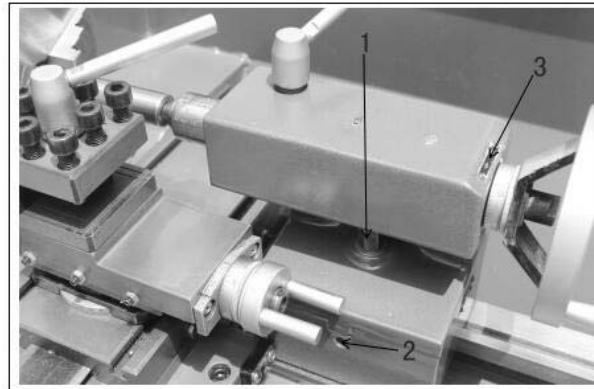


Figure 16

10.5 Taper turning by setting the top slide

By angling the top slide, tapers may be turned (Figure 17).

Loosen two screws (1, Figure 17); top slide can then be rotated. A graduated scale permits accurate adjustment of the top slide. This method can only be used for short tapers.

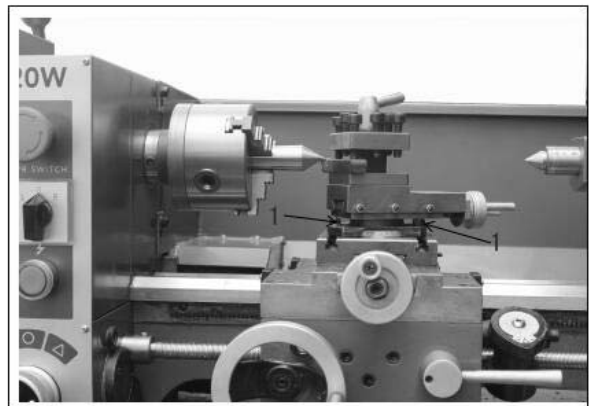


Figure 17

10.6 Turning Between Centers

For turning between centers, it is necessary to remove the chuck from the spindle. Fit the MT-3 center into the spindle nose and the MT-2 center into the tailstock.

Mount the workpiece fitted with the driver dog between the centers. The driver is driven by a catch plate or face plate (Figure 18).

Note: Always use a small amount of grease on the tailstock center to prevent center tip from overheating.

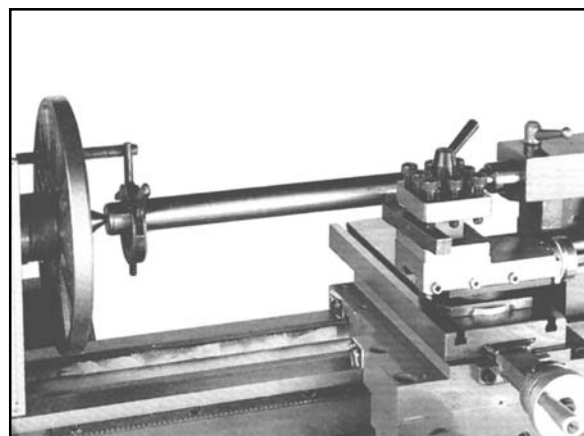


Figure 18

10.7 Thread Cutting

As indicated on the threading charts (see Figure 21), several different threads can be cut using the proper combination of gears and settings. When cutting inch threads, the half nut and threading dial (Figure 19) are used to thread in a conventional manner. The thread dial charts specify at which point a thread can be entered using the threading dial.

10.8 Metric Thread Cutting

The only difference in metric thread cutting is the half nut must be engaged during the entire threading process. The thread dial cannot be utilized.

Set the machine up for the desired thread pitch (according to the metric threading chart on the machine, also shown in sect. 16.0). Start the machine and engage the half nut. When the tool reaches the part, it will cut the initial threading pass.

When the tool reaches the end of the cut, stop the machine by turning the motor off and at the same time back the tool out of the part so that it clears the thread.

Do not disengage the half nut lever. Reverse the motor direction to allow the cutting tool to traverse back to the starting point. Repeat these steps until you have obtained the desired results.

Example of Gear Set-up to Cut 10 T.P.I. (Figure 20)

1. Loosen screw (1, Figure 20).
2. Loosen bolt (2). Remove washers (3) and gear (6).
3. Loosen bolt (7) to allow movement in the center gear position.
4. Loosen nuts (5). Remove washer (4) and gear (8).

Re-assemble as follows:

1. Install 40-tooth gear in position (6) with bushings, washer, and bolt.
2. Install 32-tooth gear in position (8).
3. The center 127-tooth gear remains in place.
4. Adjust gear to mesh with upper and lower gear and tighten bolt (7).

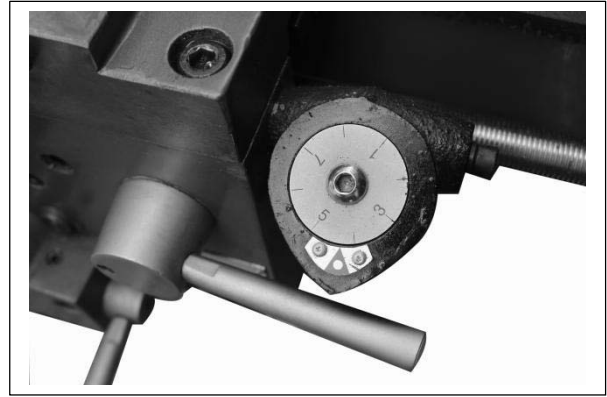


Figure 19

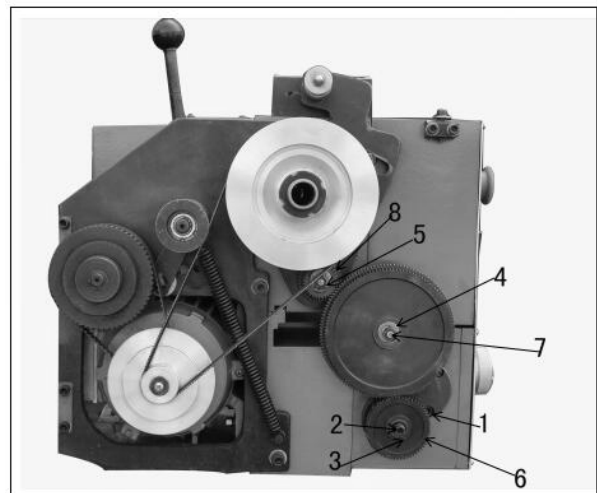


Figure 20

11.0 Lathe Accessories

11.1 Three jaw universal lathe chuck

Using this universal chuck (Figure 21), round, triangular, square, hexagonal, octagonal, and twelve-cornered stock may be clamped.

Note: new lathes have very tight fitting jaws. This is necessary to ensure accurate clamping and long service life. With repeated opening and closing, the jaws adjust automatically and their operation becomes progressively smoother.

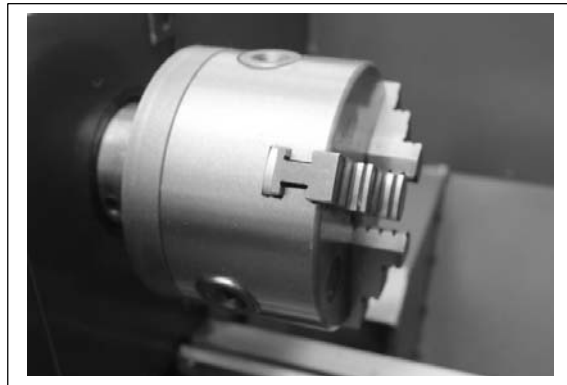


Figure 21

11.2 Four jaw independent lathe chuck

This special chuck (Figure 22) has four independently adjustable chuck jaws. These permit the holding of asymmetrical pieces and enable the accurate set-up of cylindrical pieces.

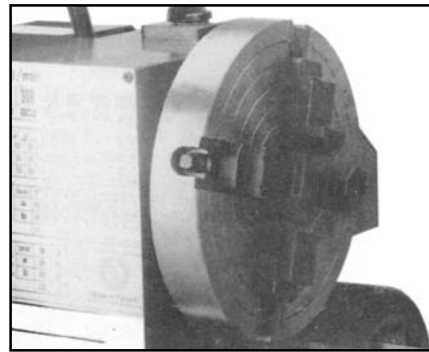


Figure 22

11.3 Drill chuck (optional)

Use the drill chuck to hold centering drills and twist drills in the tailstock (Figure 23).

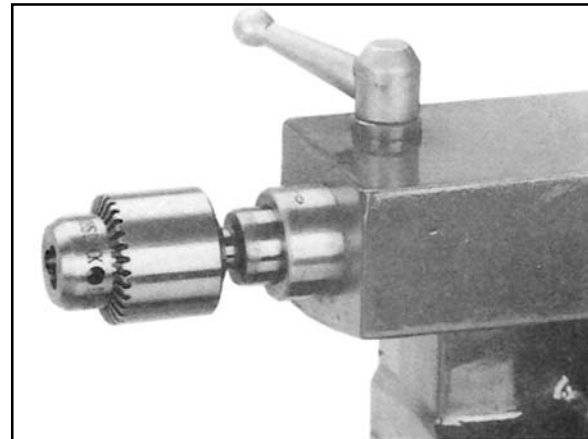


Figure 23

11.4 Morse taper arbor (optional)

An arbor is necessary for mounting the drill chuck in the tailstock. It has a No. 2 Morse Taper (Figure 23).

11.5 Live center (optional)

The live center is mounted in ball bearings (Figure 24). Its use is highly recommended for turning at speeds in excess of 600 RPM.

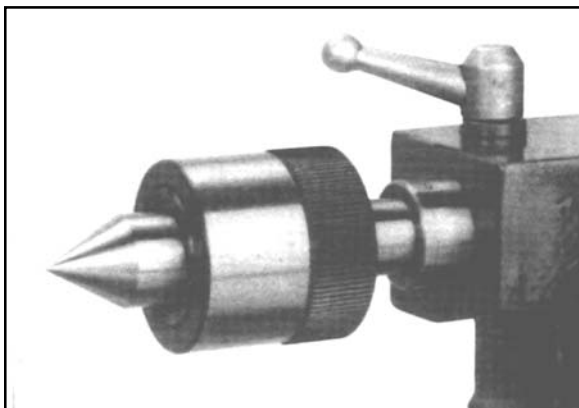


Figure 24

11.6 Steady rest

The steady rest (Figure 25) serves as a support for shafts on the free tailstock end. For many operations, the tailstock cannot be used as it obstructs the turning tool or drilling tool, and therefore, must be removed from the machine.

The steady rest, which functions as an end support, ensures chatter-free operation. The steady rest is mounted on the bedways and is secured from below with a locking plate. The sliding fingers require continuous lubrication at the contact points to prevent premature wear.

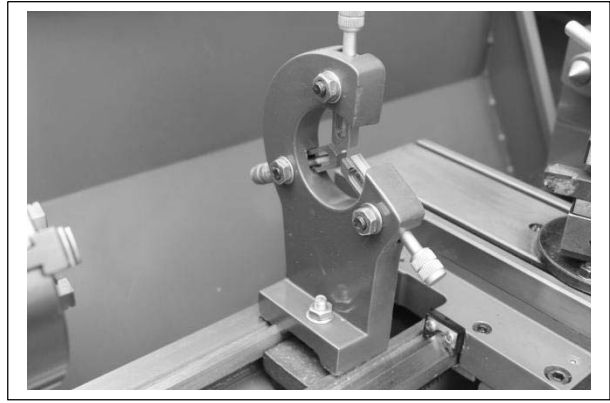


Figure 25

11.7 Setting the steady rest

1. Loosen three hex nuts (1, Figure 26).
2. Loosen knurled screw (3, Figure 26) and open the sliding fingers (2, Figure 26) until the steady rest can be moved with its fingers around the workpiece. Secure the steady rest in position.
3. Tighten knurled screws so that fingers are snug but not tight against the workpiece. Tighten three nuts (1, Figure 26). Lubricate the sliding points with machine oil.
4. When, after prolonged operation, the jaws show wear, the tips of the fingers may be filed or remilled.

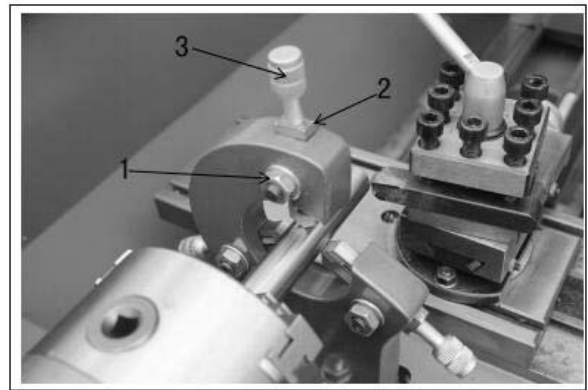


Figure 26

11.8 Follow rest

The follow rest (Figure 27) is mounted on the saddle and follows the movement of the turning tool. Only two sliding fingers are required. The place of the third finger is taken by the turning tool. The follow rest is used for turning operations on long, slender workpiece. It prevents flexing of the workpiece under pressure from the turning tool.

Set the fingers snug to the workpiece but not overly tight. Lubricate the fingers during operation to prevent premature wear.

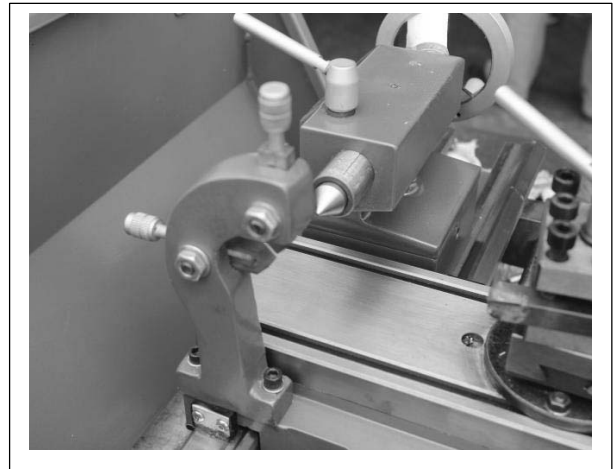


Figure 27

11.9 Stand (optional)

A steel stand (p/n 321374) specially designed for this lathe is available from JET (Figure 28). Contact your distributor or Jet to order.



Figure 28

11.10 Four-way tool post

The four-way tool post is mounted on the top slide and allows for tools to be clamped. Loosen the center clamp handle to rotate any of the four tools into position (Figure 29).

Use a minimum of two clamping screws when installing a cutting tool.

11.11 Change Gears

There are nine gears (Figure 30) with different numbers of teeth (32, 36, 38, 40, 44, 46, 48, 52 and 56). They can be combined for different speeds and feeds as required. See chart on headstock.

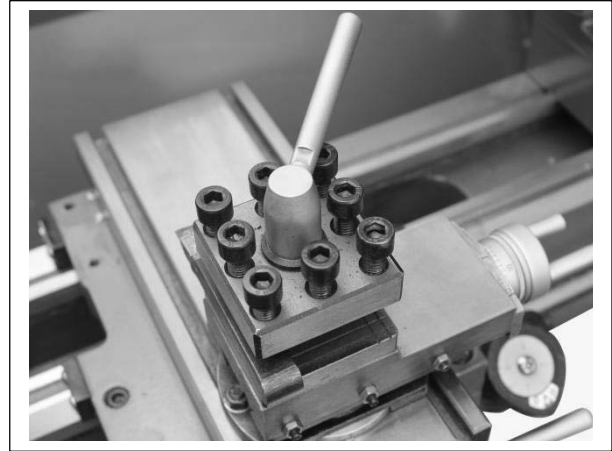


Figure 29

12.0 Adjustment/replacement

12.1 Adjustment of main spindle bearings

The main spindle bearings are adjusted at the factory. If end play becomes evident after considerable use, the bearings may be adjusted.

Loosen setscrew (1, Figure 31) in the slotted nut (2, Figure 31) on the back of the spindle. Tighten slotted nut until all end play is taken up. The spindle should still revolve freely. **Caution:** excessive tightening or preloading will damage the bearing. Re-tighten set screw (1, Figure 32).



Figure 30

12.2 Adjustment of cross and top slide

Each slide is fitted with a gib strip and can be adjusted with screw (1, Figure 32) fitted with lock nuts (2, Figure 32). Loosen the lock nuts to adjust the screws, and re-tighten lock nuts to secure the setting.

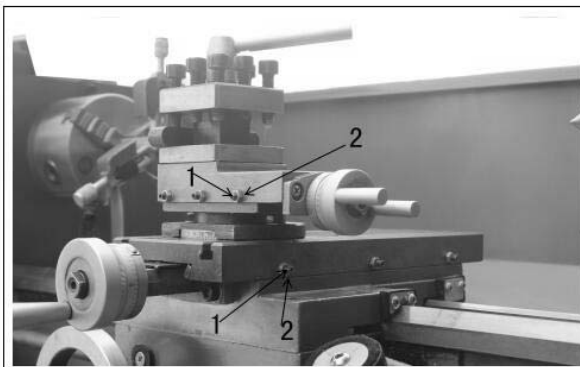


Figure 32

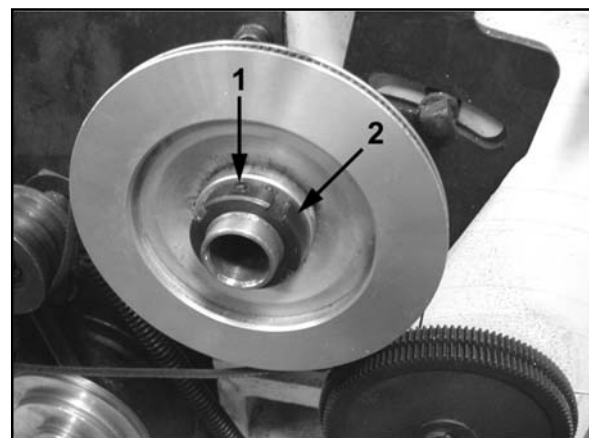


Figure 31

12.3 Adjustment of compound feed screw and float

To adjust the slides on the saddle:

1. Loosen screw (1, Figure 33) and lock nut (2, Figure 33).
2. Adjust the nut until all play has been taken up. Lock the nut (2) with the screw (1).

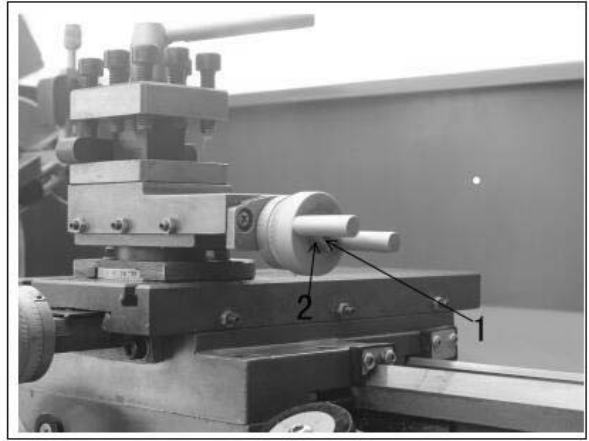


Figure 33

12.4 Cross slide screw

Remove the compound slide and adjust screw (1, Figure 34) until the backlash between the spindle and the nut is eliminated.

For operator convenience, the compound may be located in two positions on the cross slide.

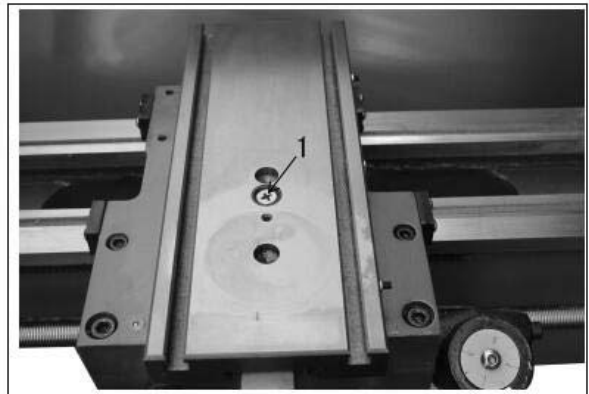


Figure 34

12.5 Compound slide spindle backlash adjustment

Remove two screws holding the spindle bracket in position and unscrew the spindle. Adjust the screw ring (1, Figure 35) until all backlash has been eliminated.

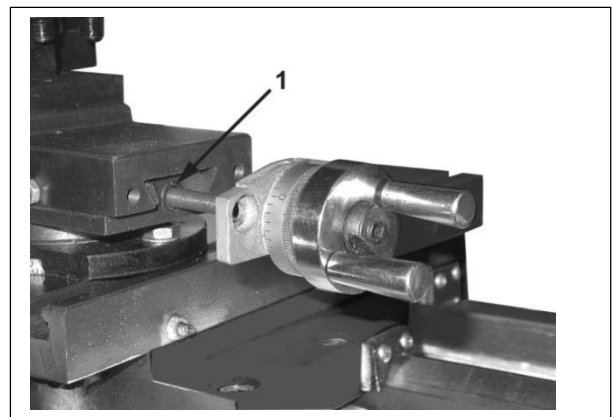


Figure 35

12.6 Adjustment of half-nut guide

Loosen two nuts (1, Figure 36) on the right side of the apron and adjust the control screws (2, Figure 36) until both half nuts move freely without play. Tighten both nuts.

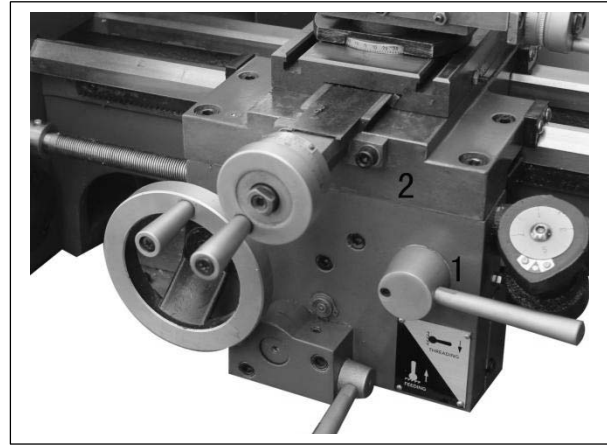


Figure 36

12.7 Replacing the shear pin in the leadscrew

If the shear pin breaks, it must be replaced (Figure 37). To knock out the broken pin, the hex head screw must be loosened and the pinion removed. Take off the sleeve and remove the broken pin from the sleeve and the leadscrew. Replace the sleeve, line up the holes, fit the new pin, and assemble.

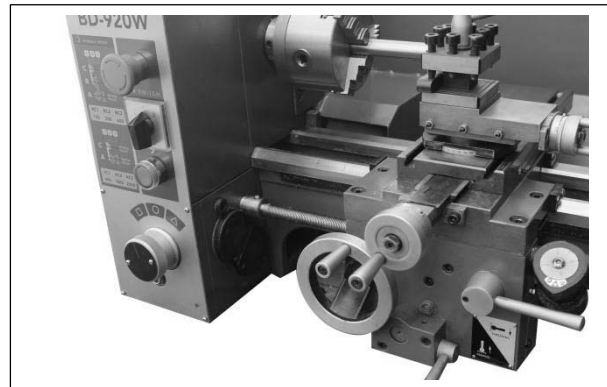


Figure 37

12.8 Replacing the V-belt

Remove tension on the V-belt by pulling lever toward front of the machine (Figure 38).

Remove belt from the pulley and replace with new belt. Move lever toward motor to tension belt. Close the cover.

Caution: to avoid breaking the belt, move the tension lever towards the front of the machine before starting (Figure 39).



Figure 39

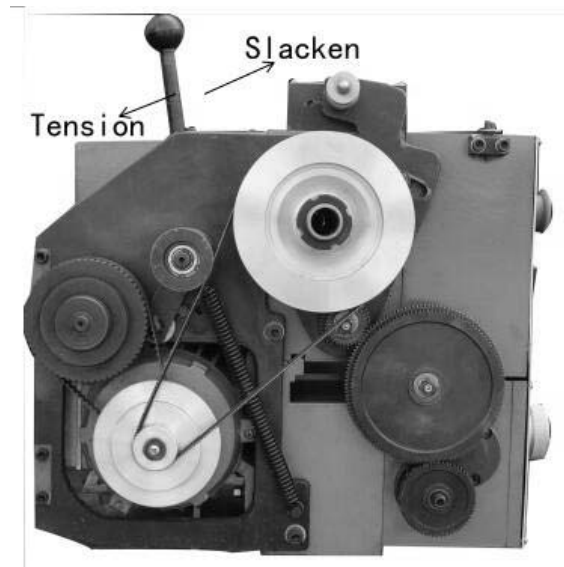


Figure 38

13.0 Lubrication Schedule

(Figures 40 and 41)

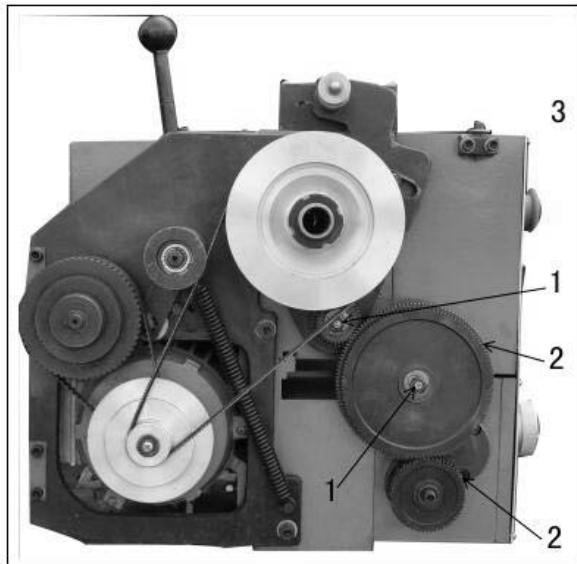


Figure 40

**Note: Lubricate all locations daily.
Grease refers to #2 tube grease.
Oil refers to 20W machine oil.**

- 1 – 1 to 2 squirts of oil into oil ball on gear hub.
- 2 – Grease teeth of feed and change gears.
1 to 2 squirts of oil into oil ball on gear hub.
- 3 – Lightly Coat gear teeth with oil.
1 to 2 squirts of oil into oil ball on gear hub.
- 4 – Wipe bedways clean and coat lightly with oil.
- 5 – Grease rack over complete length.
- 6 – Clean and oil leadscrew over complete length.
- 7 – 1 to 2 squirts of oil into oil ball on leadscrew bracket.
- 8 – Lightly coat screw and guides of top slide with oil.
- 9 – 1 to 2 squirts of oil into oil ball on top of tailstock body.
- 10 – 1 to 2 squirts of oil into oil ball on top of carriage.
- 11 – 1 to 2 squirts of oil into hub for feed lever.
- 12 – 1 to 2 squirts of oil into two oil balls on apron front.

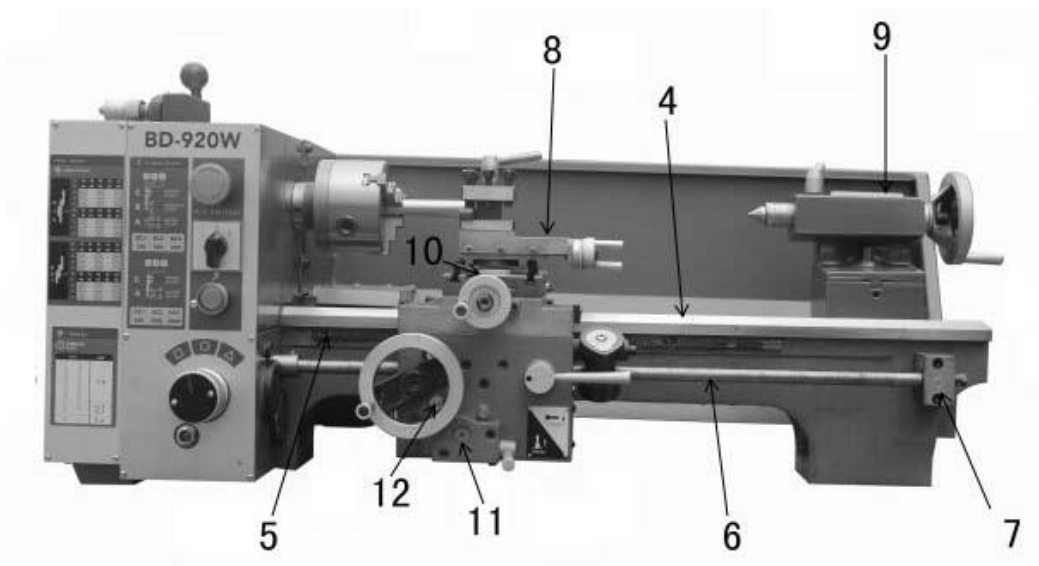
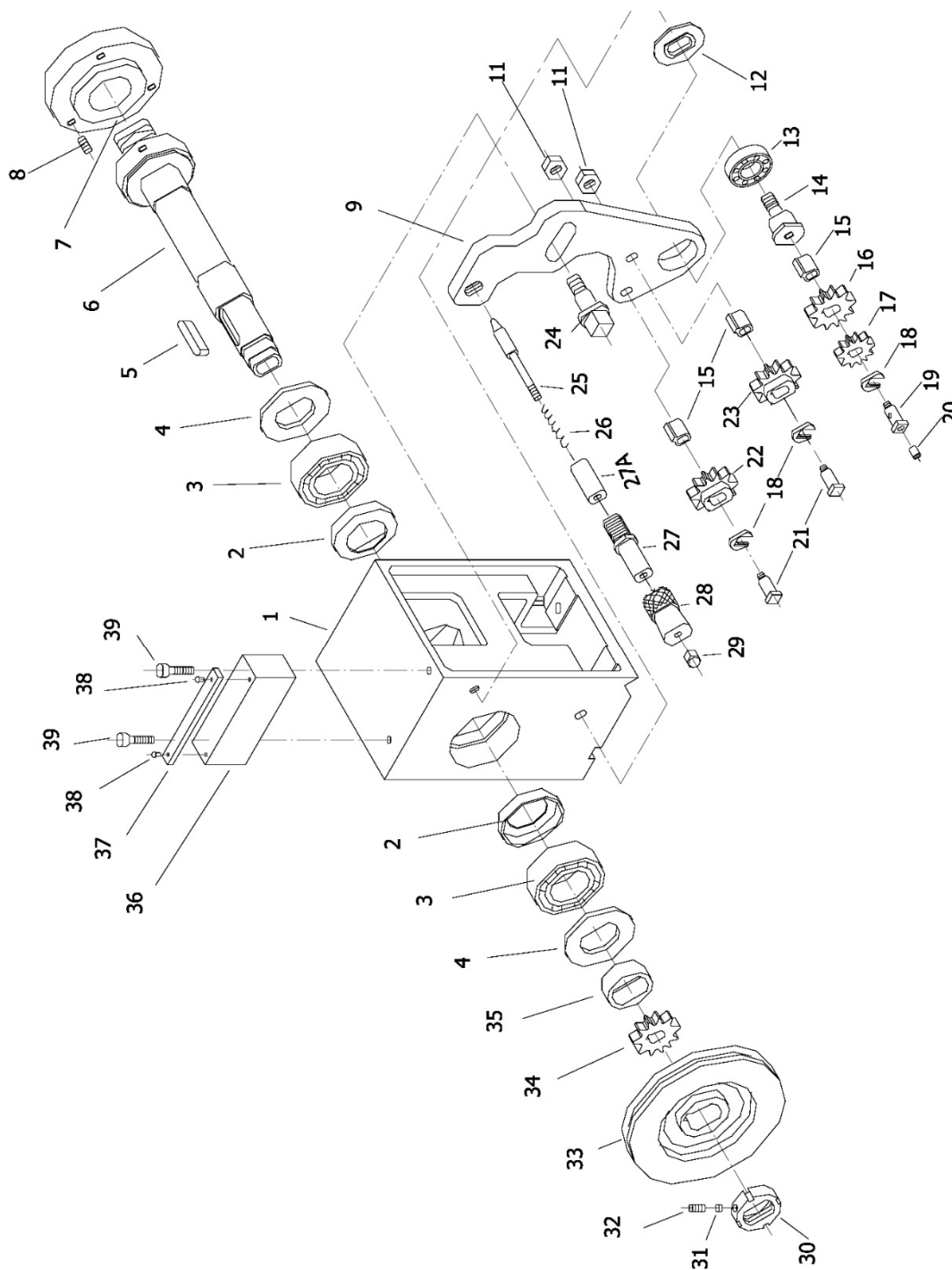


Figure 41

14.0 Replacement Parts

Replacement parts are listed on the following pages. To order parts or reach our service department, call 1-800-274-6848 Monday through Friday, 8:00 a.m. to 5:00 p.m. CST. Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

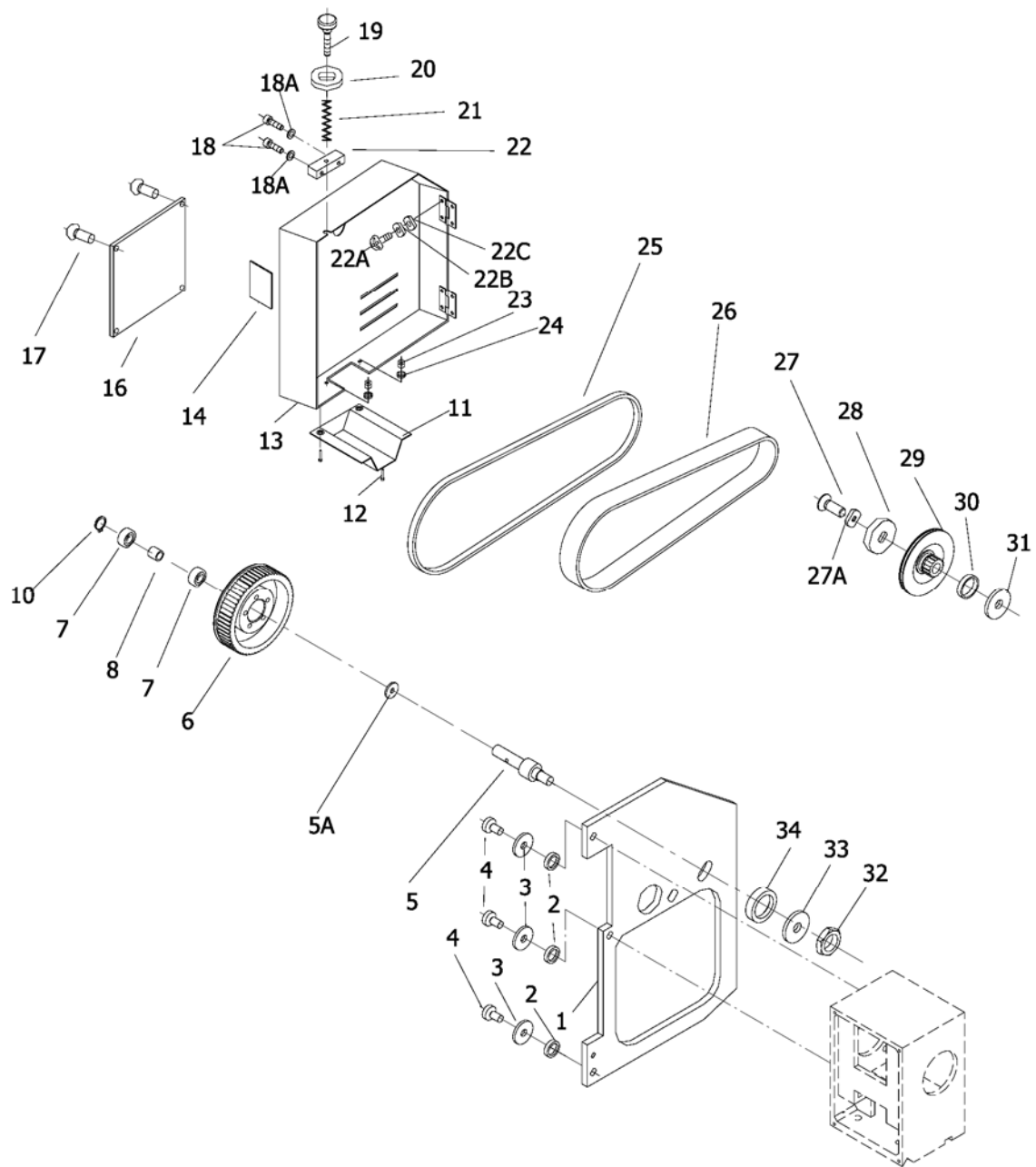
14.1.1 Headstock Assembly – Exploded View



14.1.2 Headstock Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	BD920N-1002G	Headstock Casting		1
2	1003	Cover		2
3	32007	Ball Bearing		2
4	1005	Gasket		2
5	BD920W-2008	Key	8x5x38mm	1
6	BD920W-2106	Spindle		1
7	2107/1	Flange Joint		1
8	TS-1523031	Set Screw	M6x10	1
9	2133	Bracket		1
11	GB6170-85	Hex Nut	M6	2
12	2127	Collar		1
13	61904	Ball Bearing	6904Z	1
14	2126/1	Shaft		1
15	BD920W-1112	Bushing		3
16	1018	Gear	40T	1
17	2027	Gear	32T	1
18	1013	Washer		3
19	2126/2	Shaft		1
20	BD920N-009	Oil Port	6mm	1
21	2128	Shaft		2
22	BD920W-1110	Gear	35T	1
23	BD920W-1111	Gear	46T	1
24	BD920W-2130	Screw		1
25	3004	Plunger		1
26	3005	Spring		1
27	3003	Bushing		1
27A	3003A	Spacer		1
28	3006G	Handle		1
29	GB923-88	Cap Nut		1
30	1012	Round Nut	M28x1	1
32	GB77-85	Set Screw	M5x6	1
33	1008	Pulley		1
34	1011	Gear	40T	1
35	1007	Spacer		1
36	BD920W-1114	Bracket		1
37	BD920W-1115G	Threading Direction Plate		1
38	GB818-85	Pan Head Screw	M3x5	4
39	TS-1503091	Hex Socket Cap Screw	M6x40	2

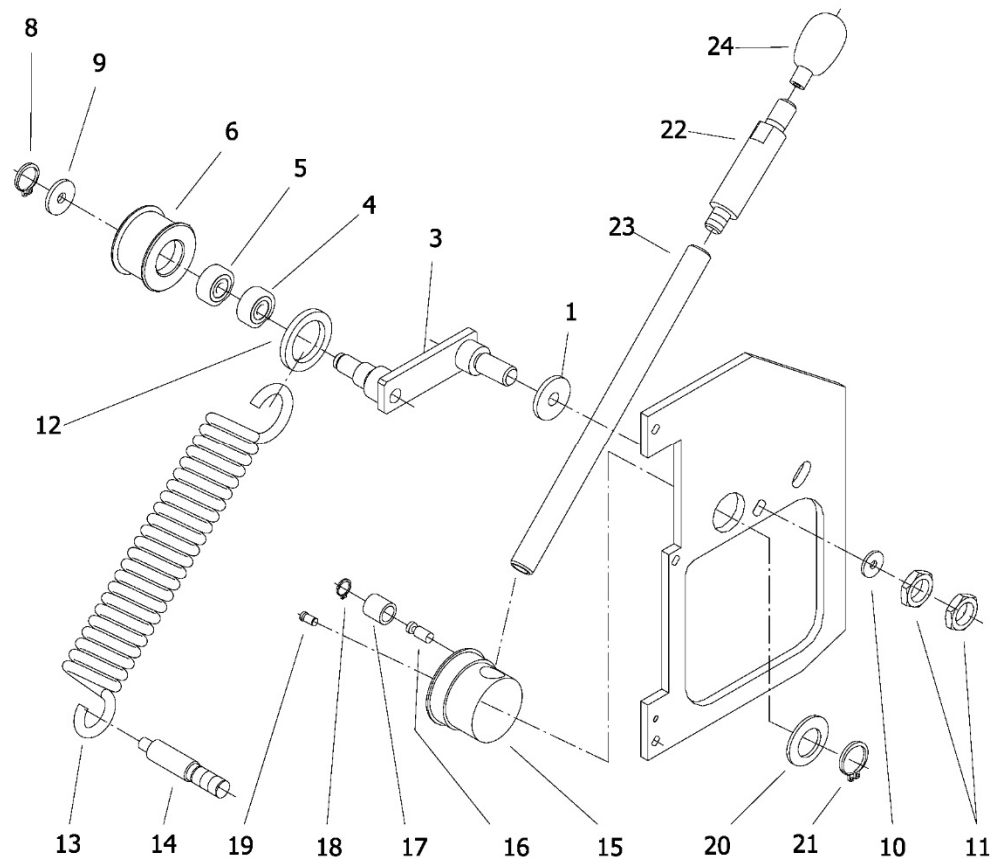
14.2.1 Drive Assembly – Exploded View



14.2.2 Drive Assembly – Parts List

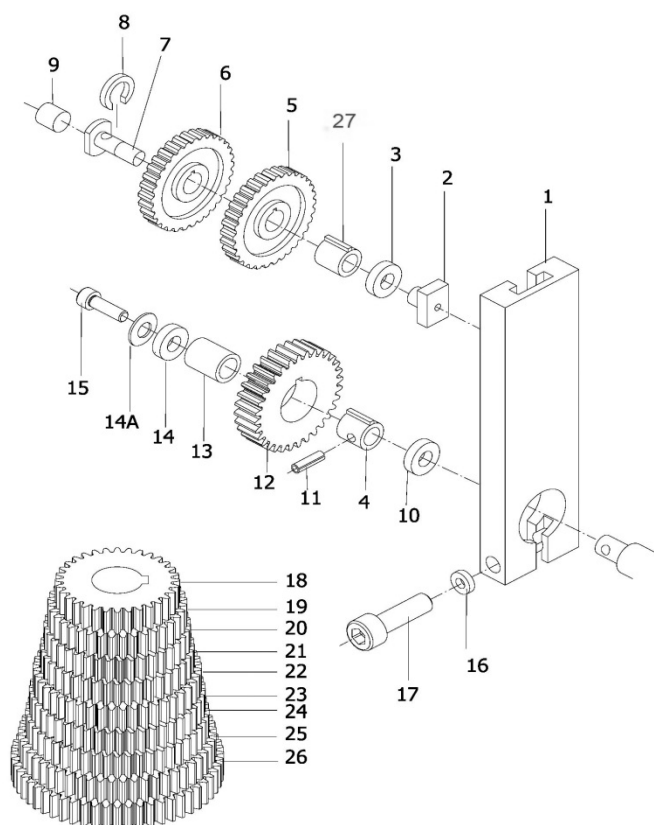
Index No.	Part No.	Description	Size	Qty
	BD920N-3J.B.S.	4-inch 3-Jaw Chuck (not shown)		1
	BD920N-CJ3	Chuck Jaw Set (set of 3; not shown)		1
	BD920N-ST	Spanner Tool for Chuck (not shown)		1
	FJ1001	4-Jaw Chuck 1-1/2" x 7 (not shown)		1
	FJ1002	1-1/2" x 8 Backplate (not shown)		1
	FJ1003	Face Plate 1-1/2" x 8 (not shown)		1
	FJ1004	Spindle with 1-1/2" x 8 TPI (not shown)		1
	BD920N-FCK	Female Chuck Key (not shown)		1
	BD920N-MCK	Male Chuck Key (not shown)		2
1	BD920W-0006	Bracket		1
2	TS-1550061	Flat Washer	8mm	3
3	TS-1551061	Lock Washer	8mm	3
4	TS-1504041	Hex Socket Cap Screw	M8x20	3
5	2113	Shaft		1
5A	1028	Washer		1
6	2112	Pulley		1
7	6001RS	Ball Bearing	6001RS	2
8	2114	Spacer		1
10	GB894-76	Snap Ring	12mm	1
11	2110/1G	Cover		1
12	TS-1533032	Pan Head Screw	M5x10	2
13	BD920W-0007G	Cover		1
14	2104AG	Label – Thread Dial		1
15	BD920W-1108	Machine Label (not shown)		1
16	BD920W-2105G	Threading Chart Plate		1
17	TS-1531012	Phillips Pan Head Machine Screw	M3x4	4
18	TS-1503051	Hex Socket Cap Screw	M6x20	2
18A	TS-1550041	Washer	6mm	2
19	TS-1503061	Hex Socket Cap Screw	M6x25	1
20	TS-2361061	Lock Washer	6mm	1
21	BD920W-2003	Spring		1
22	BD920W-2004	Bracket		1
22A	TS-1503011	Socket Head Cap Screw	M6x8	4
22B	TS-2361061	Lock Washer	6mm	4
22C	TS-1550041	Washer	6mm	4
23	TS-1540031	Hex Nut	M5	2
24	TS-1550031	Washer	5mm	4
25	VB-5M710	V-Belt		1
26	VB-170xL050	Cog Belt		1
27	GB818-85	Screw	M6x10	1
27A	GB971-85	Lock Washer	6mm	1
28	BD920W-4033	Washer	6mm	1
29	BD920W-1012	Pulley		1
30	BD920W-1013	Collar		1
31	BD920W-1014	Washer		1
32	TS-1540071	Hex Nut	M10	1
33	TS-2361101	Lock Washer	10mm	1
34	2041/1	Washer	10mm	1
35	BD920N-NOTE	Label – Note: Avoid Breaking (not shown)		1
36	BD920W-2105-1G	Feed Chart Plate		1

14.3.1 Tension Roller Assembly – Exploded View & Parts List



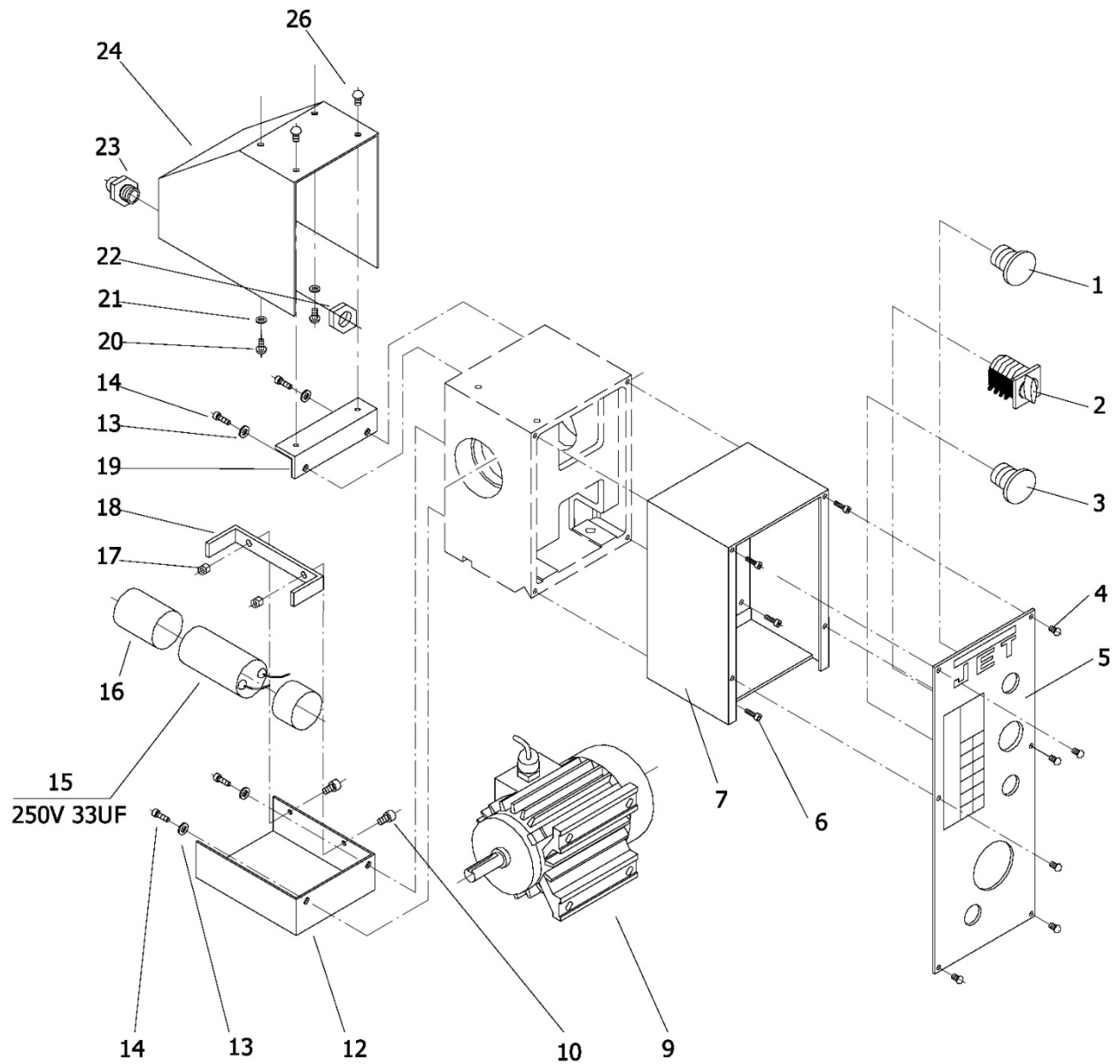
Index No.	Part No.	Description	Size	Qty
1	1040N	Washer	16mm	1
3	1035A	Swing Arm		1
4	BD920N-TR05	Ball Bearing	6001RS	1
5	BD920N-TR05	Ball Bearing	6001RS	1
6	1039	Roller		1
8	BD920N-TR08	Snap Ring	12mm	1
9	1038	Washer	28mm	1
10	TS-1550071	Washer	10mm	1
11	TS-1540071	Nut	M10	2
12	1036	Washer		1
13	1037	Spring		1
14	1050	Stud Bolt		1
15	1032	Toggle		1
16	1051	Pin		1
17	1033	Sleeve		1
18	BD920N-TR18	Snap Ring	6mm	1
19	TS-1524011	Set Screw	M8x8	1
20	1034	Wave Washer		1
21	BD920N-TR21	Snap Ring	35mm	1
22	1042	Lever		1
23	1043	Lever		1
24	1044A	Knob		1

14.4.1 Quadrant Assembly – Exploded View & Parts List



Index No.	Part No.	Description	Size	Qty
1	2003A	Bracket		1
2	2004	T-Nut		1
3	TS-1550041	Washer		1
4	2009	Bushing		2
5	BD920N-2001	Gear	127T	1
6	BD920N-2002	Gear	120T	1
7	BD920N-2005	Shaft		1
8	BD920N-2006	Washer		1
9	BD920N-Q09	Oil Port	6mm	1
10	TS-1550071	Washer	10mm	1
11	BD920N-Q11	Spring Pin	3x12mm	1
12	2071	Gear	60T	1
13	2008	Spacing Ring		1
14	TS-1550041	Washer	6mm	1
14A	TS-1551041	Lock Washer	6mm	1
15	TS-1503031	Hex Socket Cap Screw	M6x12	1
16	TS-1551041	Lock Washer	6mm	1
17	TS-1503091	Hex Socket Cap Screw	M6x40	1
18	2070	Gear	32T	1
19	2011	Gear	36T	1
20	BD920W-2020	Gear	38T	1
21	2072	Gear	40T	1
22	2073	Gear	44T	1
23	2074	Gear	46T	1
24	2075	Gear	48T	1
25	2076	Gear	52T	1
26	BD920W-2014	Gear	56T	1
27	BD920N-1112	Bushing		1

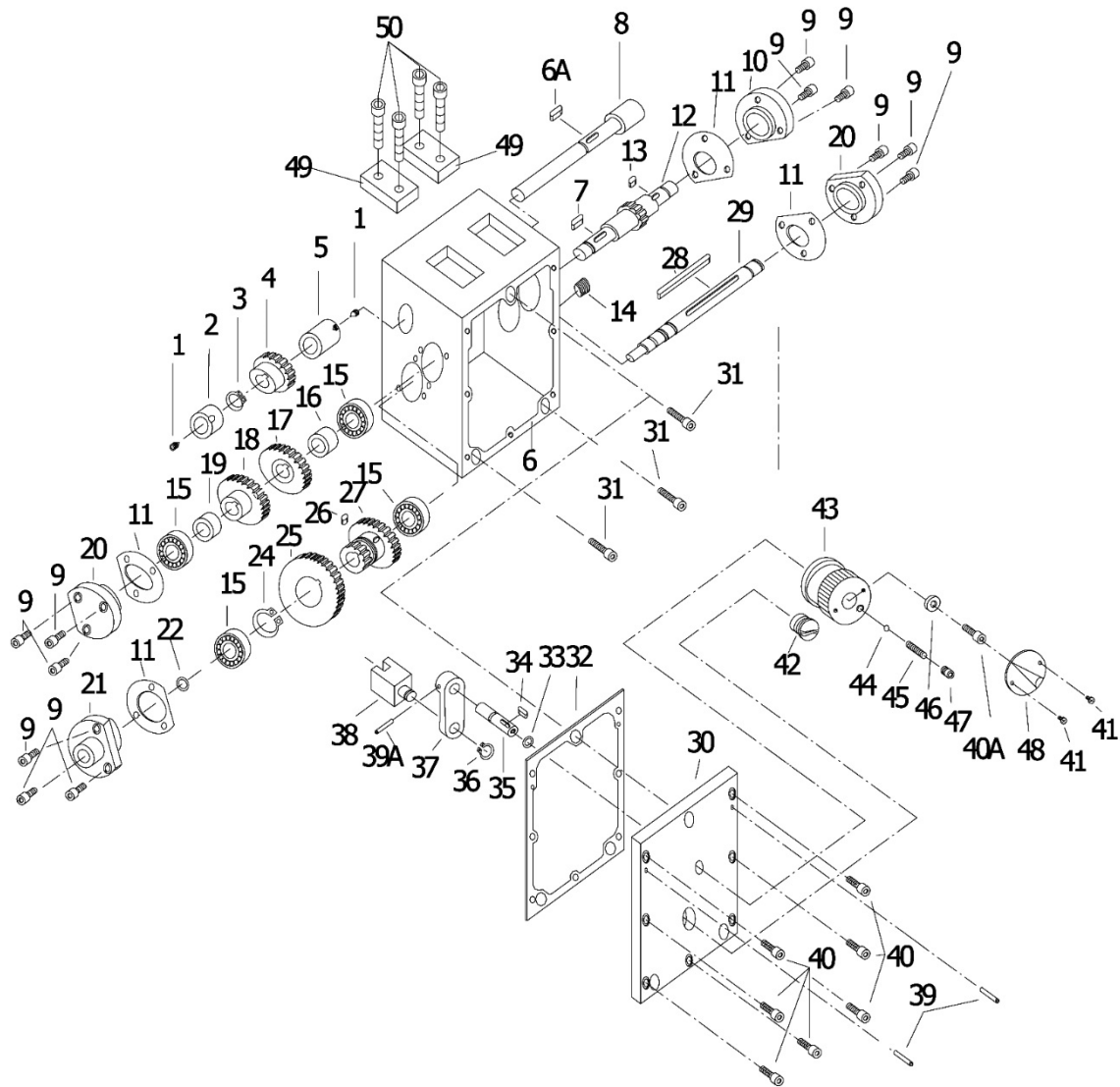
14.5.1 Electrical Assembly – Exploded View



14.5.2 Electrical Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	BD920N-E20G	EMG Switch		1
2	BD920N-E21	Switch		1
3	BD920N-E22G	Indicator Light		1
4	TS-1531012	Phillips Pan Head Machine Screw	M3x5	6
5	BD920W-02001G	Plate		1
6	BD920N-E10	Hex Screw	M5x10	4
7	BD920W-1116G	Electrical Control Box		1
9	BD920N-E11	Motor	.3/4HP, 115V, 60Hz	1
	BD920N-E11-1	Motor Junction Box Cover		1
	BD920N-MOTORFAN	Motor Fan (not shown)		1
10	TS-1502021	Socket Head Cap Screw	M5x10	2
12	BD920W-1104G	Housing		1
13	TS-2361061	Lock Washer	6mm	4
14	TS-1503031	Screw	M6x12	4
15	BD920N-E06	Condenser		1
16	BD920N-E05	Condenser Clip		1
17	TS-1540031	Nut	M5	2
18	BD920N-E16	Capacitor Support		1
19	1103G	Bracket		1
20	TS-1533032	Phillips Pan Head Machine Screw	M5x10	2
21	TS-2361051	Lock Washer	5mm	2
22	BD920N-E07	Lock Nut		1
23	BD920N-E08	Screw Coupling		1
24	BD920W-1105G	Housing		1
26	GB818-85	Hex Screw	M5x6	4
	3TF31	Contactor (not shown)		1

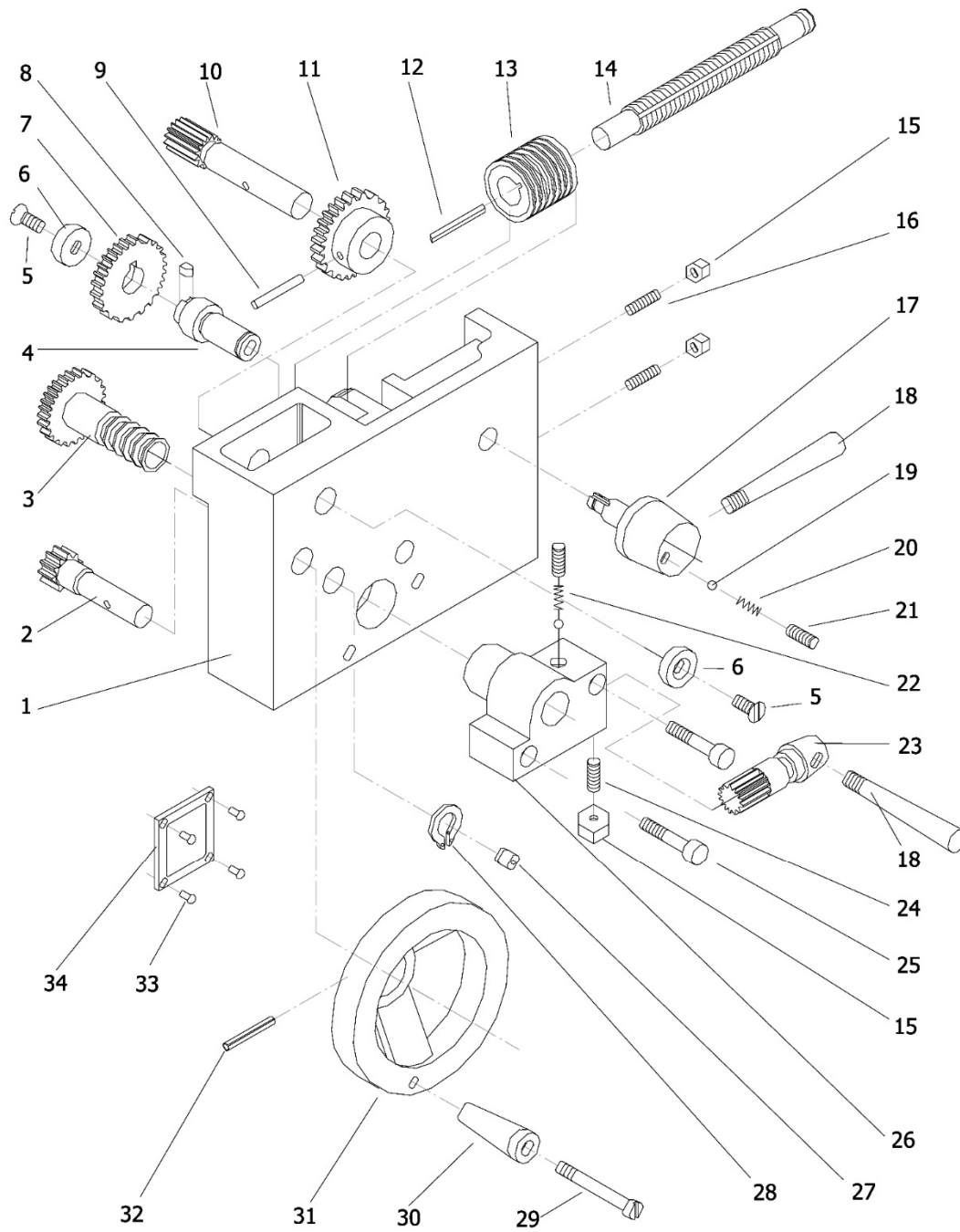
14.6.1 Gear Box Assembly – Exploded View



14.6.2 Gear Box Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	TS-1522011	Set Screw	M5x6	1
2	BD920N-GB02	Bushing		1
3	BD920N-GB15	Snap Ring	16mm	1
4	CQ6123B-3114	Gear	27T	1
5	CQ6123B-3115	Bushing		1
6	CQ6123B-3101G	Gear Box Casting		1
6A	CQ6123B-3101A	Key	5x8mm	1
7	BD920N-GB07	Key	5x16mm	1
8	CQ6123B-3113	Shaft		1
9	TS-1503021	Socket Head Cap Screw	M6x10	12
10	CQ6123B-3122	Cover		1
11	CQ6123B-3110	Gasket		4
12	CQ6123B-3108	Gear Shaft Assembly	18T	1
13	BD920N-GB13	Key	5x10mm	1
14	BD920N-05-75	Oil Plug		1
15	BB-6202ZZ	Ball Bearing	6202ZZ	4
16	CQ6123B-3123	Bushing		1
17	CQ6123B-3124	Gear	27T	1
18	CQ6123B-3111	Gear	36T	1
19	CQ6123B-3109	Bushing		1
20	CQ6123B-3107	Cover		2
21	CQ6123B-3105	Cover		1
22	BD920N-GB22	O-Ring	10x1.8mm	1
24	BD920W-GB24	Snap Ring	30mm	1
25	CQ6123B-3103	Gear	36T	1
26	CQ6123B-3101A	Key	5x8mm	1
27	CQ6123B-3102	Gear	18T, 27T	1
28	CQ6123B-3104	Key	5x68mm	1
29	CQ6123B-3106	Shaft		1
30	CQ6123B-3118G	Cover		1
31	TS-1504041	Socket Head Cap Screw	M8x20	3
32	CQ6123B-3117	Gasket		1
33	GB3452.1-82	O-Ring	8.75x1.8mm	1
34	BD920W-79	Key	4x12mm	1
35	CQ6123B-3116	Shaft		1
36	BD920N-TR08	Snap Ring	12mm	1
37	CQ6123B-3119	Shift Lever		1
38	CQ6123B-3120	Shift Fork		1
39	BD920N-GB39	Spring Pin	4x20mm	2
39A	BD920N-GB39A	Spring Pin	5x25mm	1
40	BD920N-GB40	Socket Head Cap Screw	M5x14	7
40A	TS-1503031	Socket Head Cap Screw	M6x12	1
41	TS-1531012	Pan Head Machine Screw	M3x6	2
42	BD920N-GB42	Oil Sight Glass		1
43	BD920N-05-09G	Knob		1
44	SB-6MM	Steel Ball	6mm	1
45	GB2089-80	Spring	1x6x28mm	1
46	BD920N-05-08	Washer		1
47	TS-1524011	Set Screw	M8x8	1
48	BD920N-05-70G	Plate		1
49	BD920W-0301G	Cover		2
50	BD920W-S1	Flat Head Screw	M5x8	8

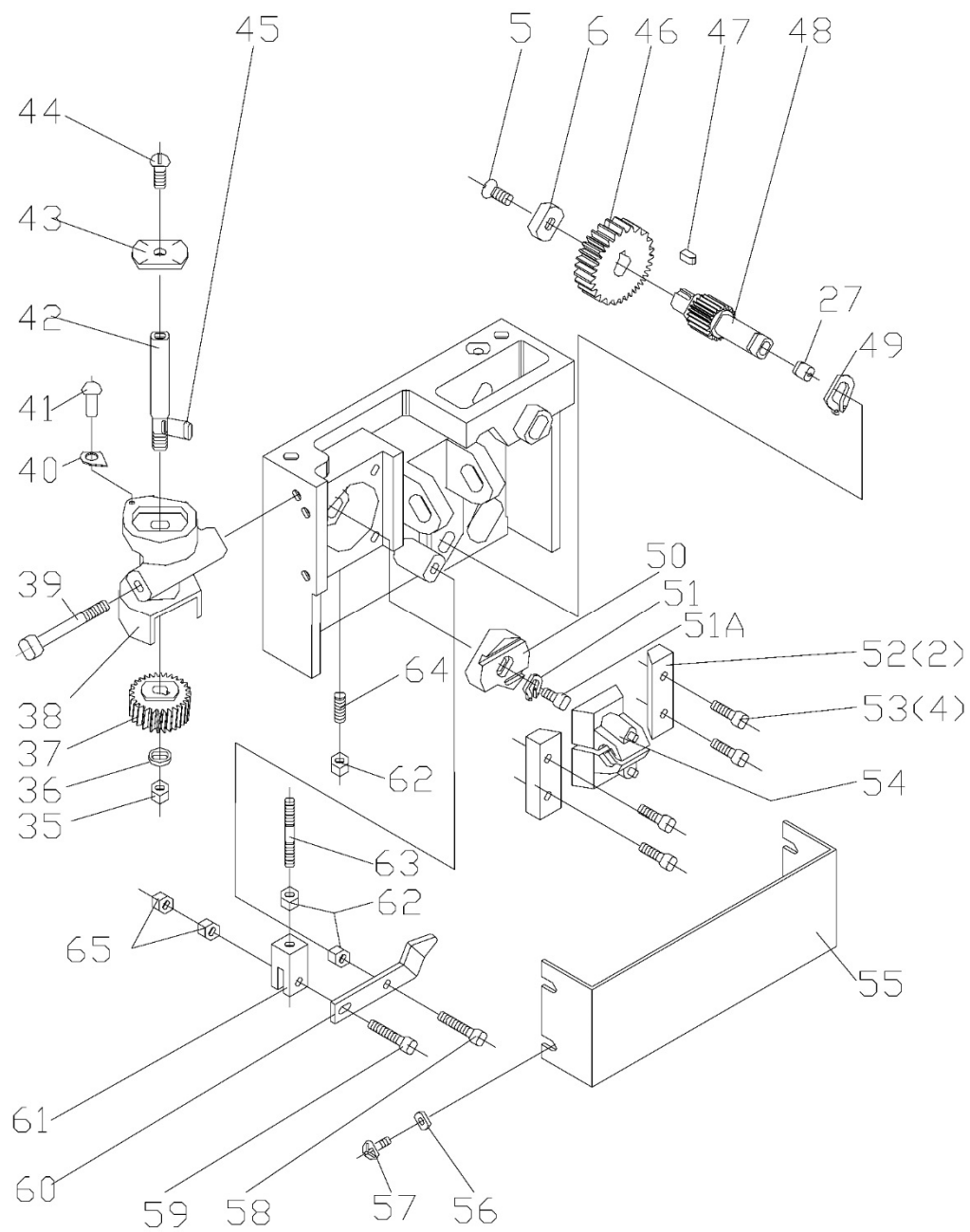
14.7.1 Apron Assembly – Exploded View



14.7.2 Apron Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	4006G	Apron Casting		1
2	4004	Gear	17T	1
3	4011	Gear	36T	1
4	4009	Shaft		1
5	BD920N-A14	Flat Head Screw	M6x8	3
6	4005	Washer		3
7	4010	Gear	41T	1
8	BD920N-A26	Key	4x6mm	1
9	BD920N-A16	Spring Pin	4x30mm	1
10	4008	Gear	12T	1
11	4007	Gear	43T	1
12	BD920W-4012	Key	3x28mm	1
13	4033	Worm		1
14	7003	Feed Screw	16TPI	1
15	TS-1540021	Nut	M4	2
16	TS-1521051	Set Screw	M4x12	2
17	BD920W-0002G	Shaft		1
18	4015AG	Handle		2
19	BD920N-A09	Steel Ball	4.5mm	2
20	4021	Spring		1
21	TS-1523011	Set Screw	M6x6	2
22	4025	Spring		1
23	4014G	Gear	13T	1
24	TS-1521041	Set Screw	M4x10	1
25	TS-1503071	Socket Head Cap Screw	M6x30	2
26	4013	Bracket		1
27	BD920N-A29	Oil Port	6mm	2
28	BD920N-A28	Snap Ring	14mm	1
29	BD920N-4002	Screw		1
30	4001G	Handle		1
31	4003	Hand Wheel		1
32	BD920N-A32	Spring Pin	4x25mm	1
33	BD920N-A36	Rivet	2x3mm	4
34	4018G	Label: Half-Nut Lever		1

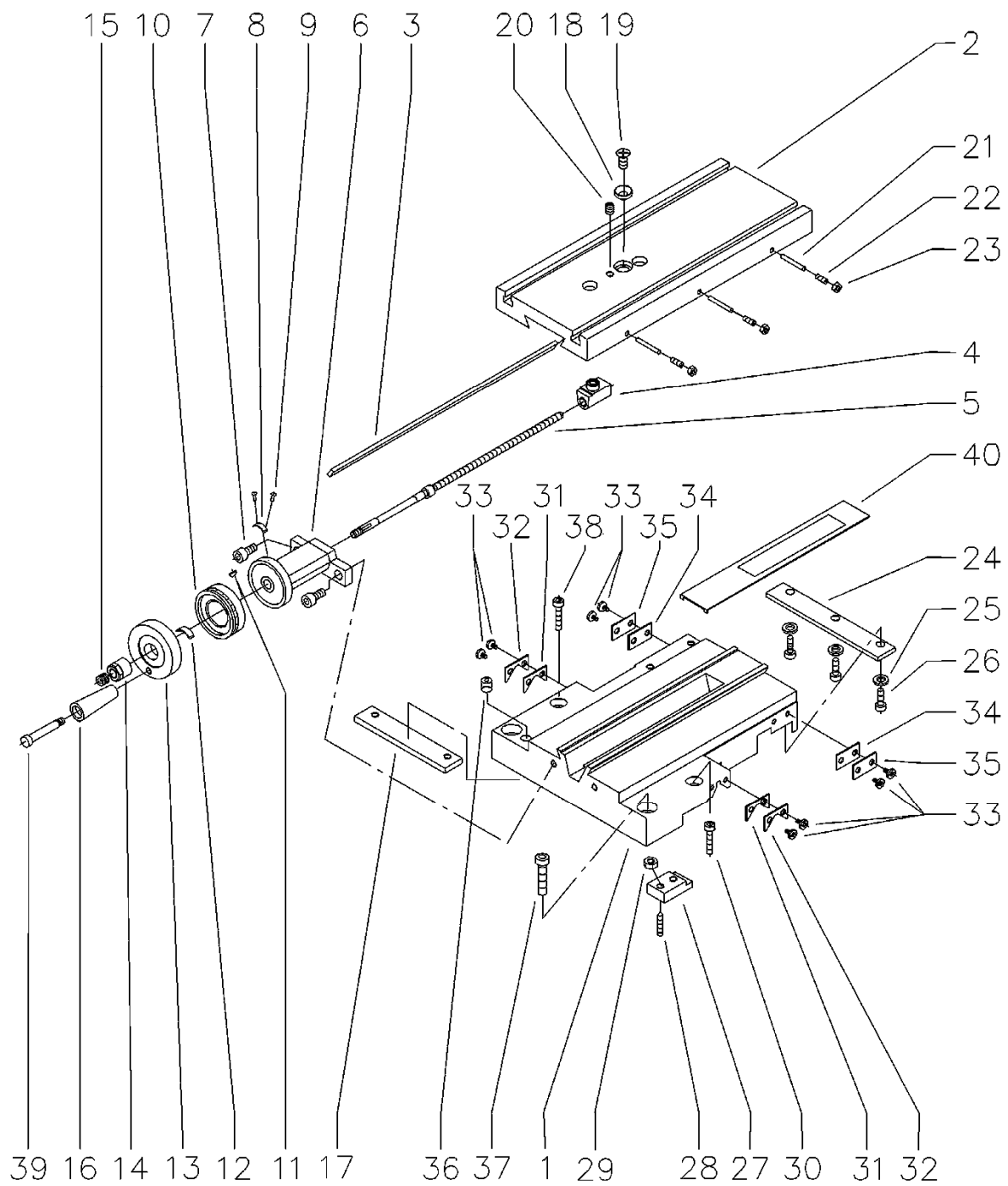
14.7.3 Apron Assembly (continued) – Exploded View



14.7.4 Apron Assembly (continued) – Parts List

Index No.	Part No.	Description	Size	Qty
35	TS-1540061	Hex Nut	M8	1
36	TS-1550061	Washer	8mm	1
37	4029	Worm Gear	64T	1
38	4036	Thread Dial Body		1
39	TS-1503131	Socket Head Cap Screw	M6x60	1
40	4024	Pointer		1
41	BD920N-A62	Rivet	2x3mm	1
42	4028	Shaft		1
43	4027	Dial		1
44	TS-1503011	Socket Head Cap Screw	M6x8	1
45	BD920N-A56	Key	3x8mm	1
46	4012	Worm Gear	42T	1
47	BD920N-A38	Key	4x10mm	1
48	4016	Gear	18T	1
49	BD920N-A40	Ring	12mm	1
50	4019	Locking Cam		1
51	BD920N-A44	Ring	4mm	1
51A	TS-1501011	Socket Head Cap Screw	M4x6	1
52	4020	Guide		2
53	TS-1501051	Hex Socket Cap Screw	M4x16	4
54	4017	Half Nut		1
55	4023G	Apron Cover		1
56	TS-1550021	Washer	4mm	4
57	TS-1532021	Pan Head Machine Screw	M4x6	4
58	TS-1502041	Socket Head Cap Screw	M5x16	1
59	TS-1501061	Socket Head Cap Screw	M4x20	1
60	4032	Joint Plate		1
61	4030	Control Block		1
62	TS-1540031	Hex Nut	M5	3
63	4031	Screw	M5x40	1
64	BD920N-A46	Set Screw	M5x25	1
65	TS-1540021	Hex Nut	M4	2

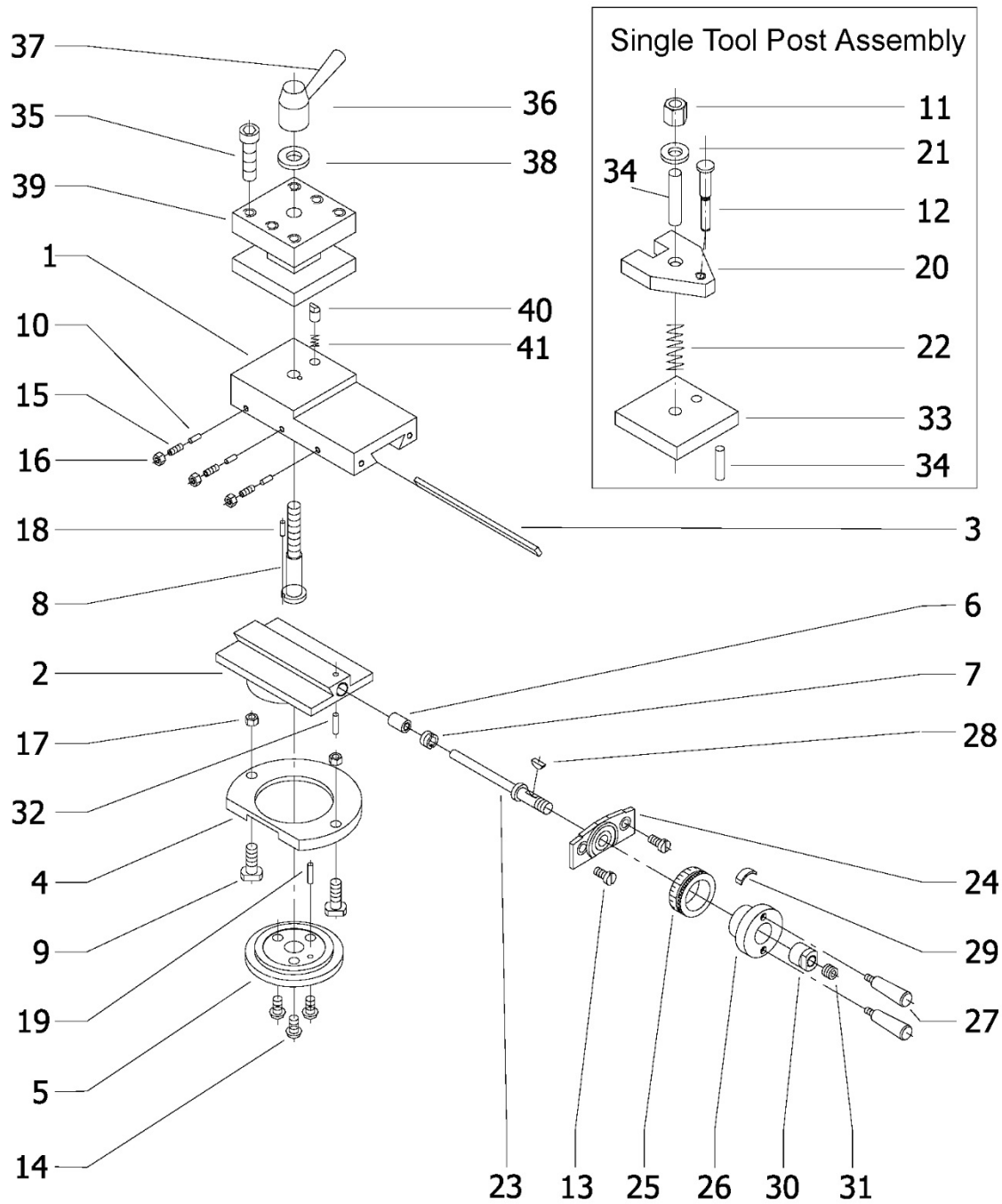
14.8.1 Saddle and Cross Slide – Exploded View



14.8.2 Saddle and Cross Slide Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	5005G	Saddle		1
2	5006	Cross Slide		1
3	5002	Gib		1
4	5036	Nut		1
5	5018	Lead Screw		1
6	5019	Bracket		1
7	TS-1503041	Socket Head Cap Screw	M6x16	2
8	5026	Plate		1
9	BD920N-CS09	Rivet	1.5x3mm	2
10	5020	Graduated Ring		1
11	BD920N-CS11	Key	3x10mm	1
12	5023	Spring		1
13	5021G	Hand Wheel		1
14	5022	Hex Nut		1
15	TS-1524011	Set Screw	M8x8	1
16	5025G	Handle		1
17	5003	Slide Block		1
18	5037	Bushing		1
19	BD920N-A14	Flat Head Screw	M6x8	1
20	TS-1523021	Set Screw	M6x8	1
21	5001	Pin		3
22	TS-1521041	Set Screw	M4x10	3
23	TS-1540021	Nut	M4	3
24	5016	Slide Block		1
25	TS-1550041	Washer	M6	3
26	TS-1503041	Socket Head Cap Screw	M6x16	3
27	5017	Clip		1
28	TS-1523061	Set Screw	M6x20	1
29	TS-1540041	Nut	M6	1
30	TS-1503061	Socket Head Cap Screw	M6x25	1
31	5042	Way Cover		2
32	5041	Cover Mount		2
33	TS-1432012	Pan Head Screw	M4x8	8
34	5040	Way Cover		2
35	5039	Cover Mount		2
36	BD920N-CS36	Oil Port	8mm	1
37	TS-1504061	Socket Head Cap Screw	M8x30	2
38	TS-1503061	Socket Head Cap Screw	M6x30	1
39	5024	Handle Screw		1
40	5038	Cover Mount		1

14.9.1 Top Slide Assembly – Exploded View



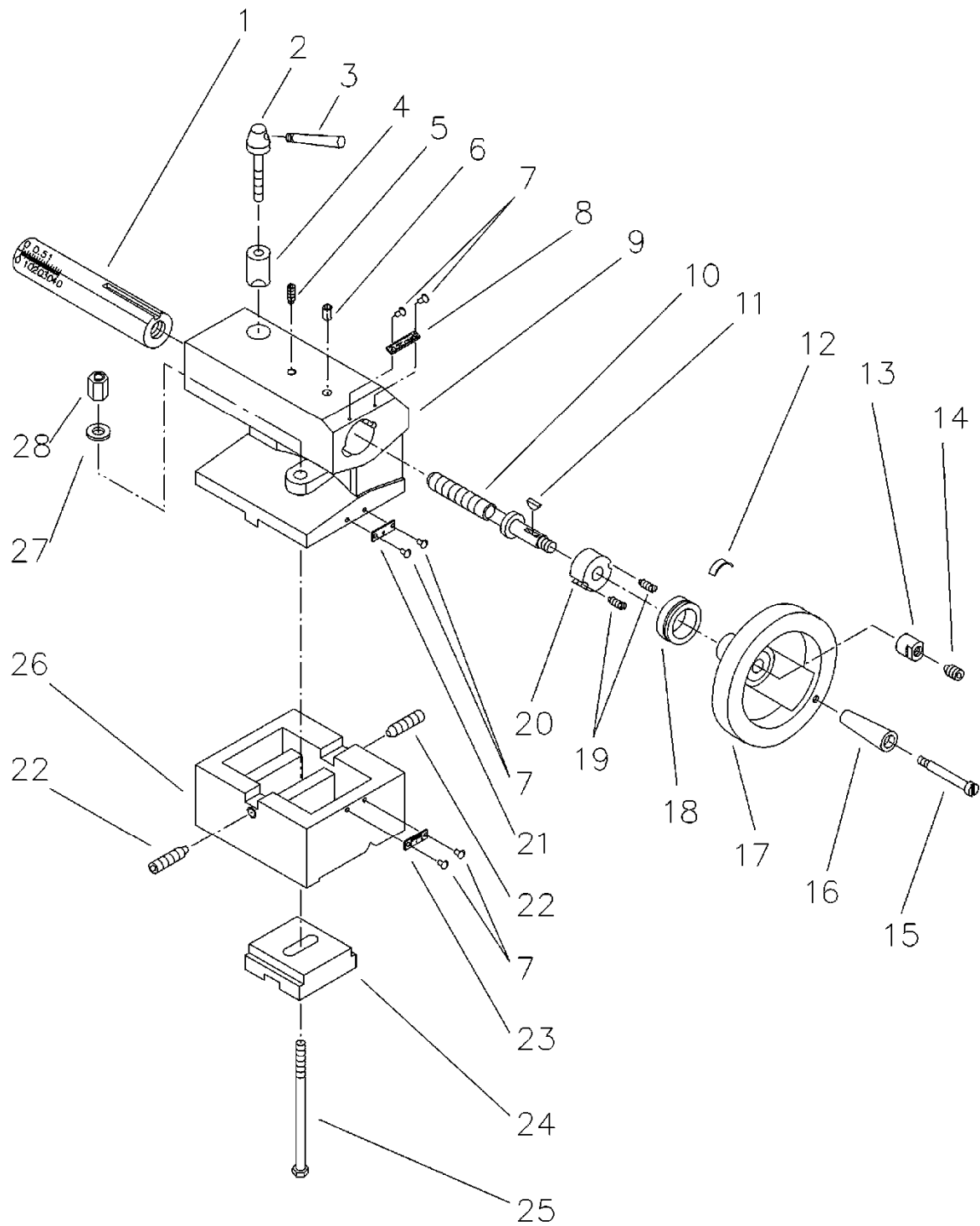
14.9.2 Top Slide Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
.....	BD920N-TSA	Top Slide Assembly without Tool Post (index nos. 1-32, 36-38, 40, 41)		1
.....	BD920N-TP	Four Way Tool Post, Complete (index nos. 35 and 39)		1
1	5011	Longitudinal Slide		1
2	5010	Swivel Base		1
3	5028	Gib		1
4	5008	Clamping Plate		1
5	5009	Micrometer Pan		1
6	5013	Lead Screw Nut		1
7	5014	Adjusting Screw		1
8	5033	Screw		1
9	5007	T-Screw		2
10	5027	Pin		3
13	TS-1502021	Socket Head Cap Screw	M5x10	2
14	BD920N-TS14	Flat Head Screw	M6x10	3
15	TS-1521041	Set Screw	M4x10	3
16	TS-1540021	Nut	M4	3
17	TS-1540041	Nut	M6	2
18	BD920N-TS18	Lock Pin	4x12mm	1
19	BD920N-TS19	Lock Pin	3x14mm	1
23	5012	Lead Screw		1
24	5043	Lead Screw Mount		1
25	5004	Micrometer Collar		1
26	5031G	Handwheel		1
27	5015G	Handle		2
28	BD920N-CS11	Key	3x10mm	1
29	5023	Feed Spring		1
30	5022	Nut		1
31	TS-1524011	Set Screw	M8x8	1
32	BD920N-TS32	Lock Pin	3x12mm	1
35	BD920N-TS35	Bolt	M8x30	8
36	BD920N-HSG	Handle Seat		1
37	BD920N-HG	Handle		1
38	BD920N-TS38	Washer		1
39	BD920N-TS39	4-Way Tool Post		1
40	BD920N-TS40	Pin		1
41	BD920N-TS41	Spring		1

Single Tool Post Assembly:

.....	BD920N-STP	Single Tool Post Assembly (contains all items below)		1
11	5032	Nut		1
12	TS-1490051	Hex Cap Screw	M8x30	1
20	5030	Tool Clamp		1
21	BD920N-TS21	Washer	M8	1
22	5034	Spring		1
33	5029	Plate		1
34	5035	Pin	8x20mm	1

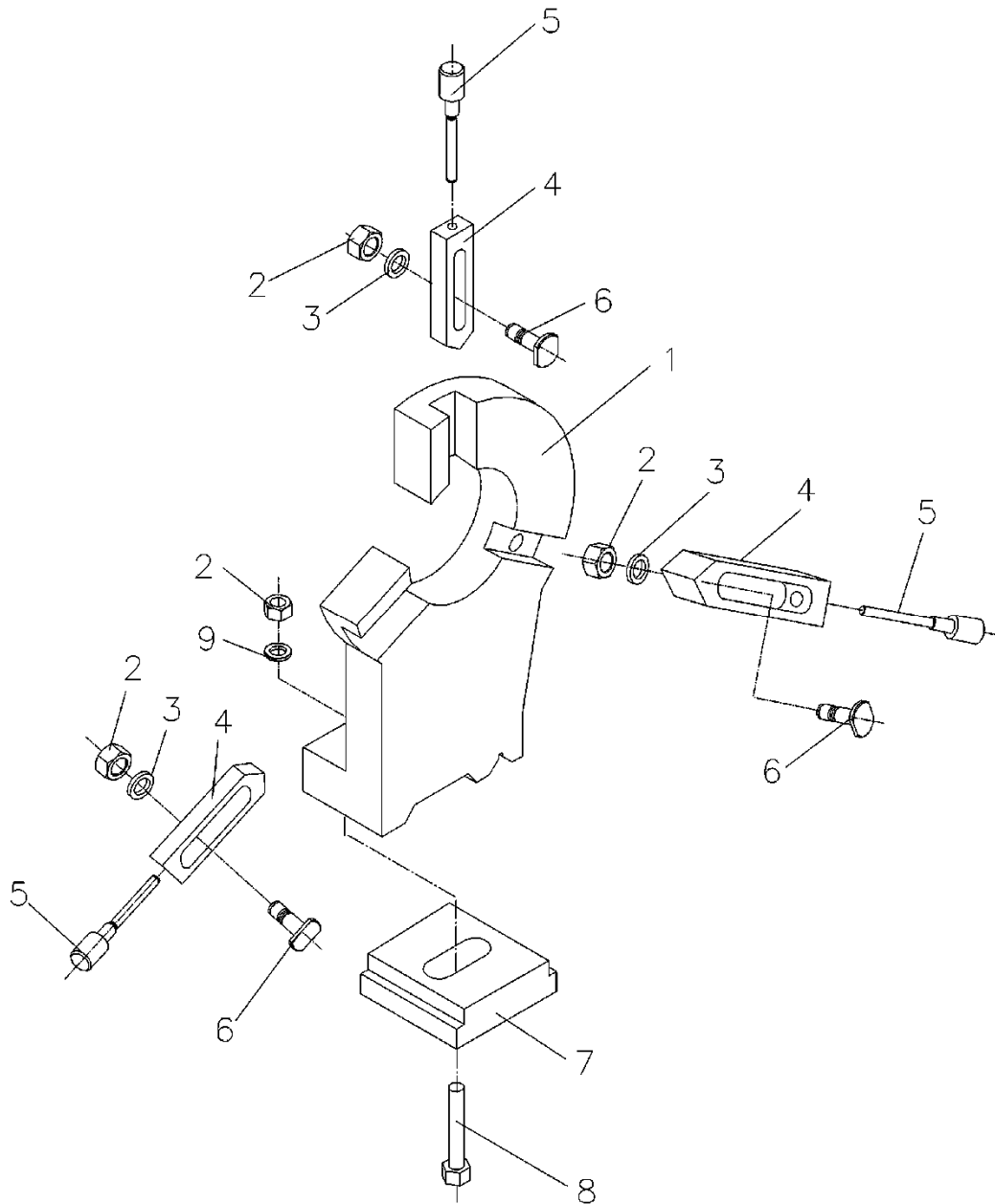
14.10.1 Tailstock Assembly – Exploded View



14.10.2 Tailstock Assembly – Parts List

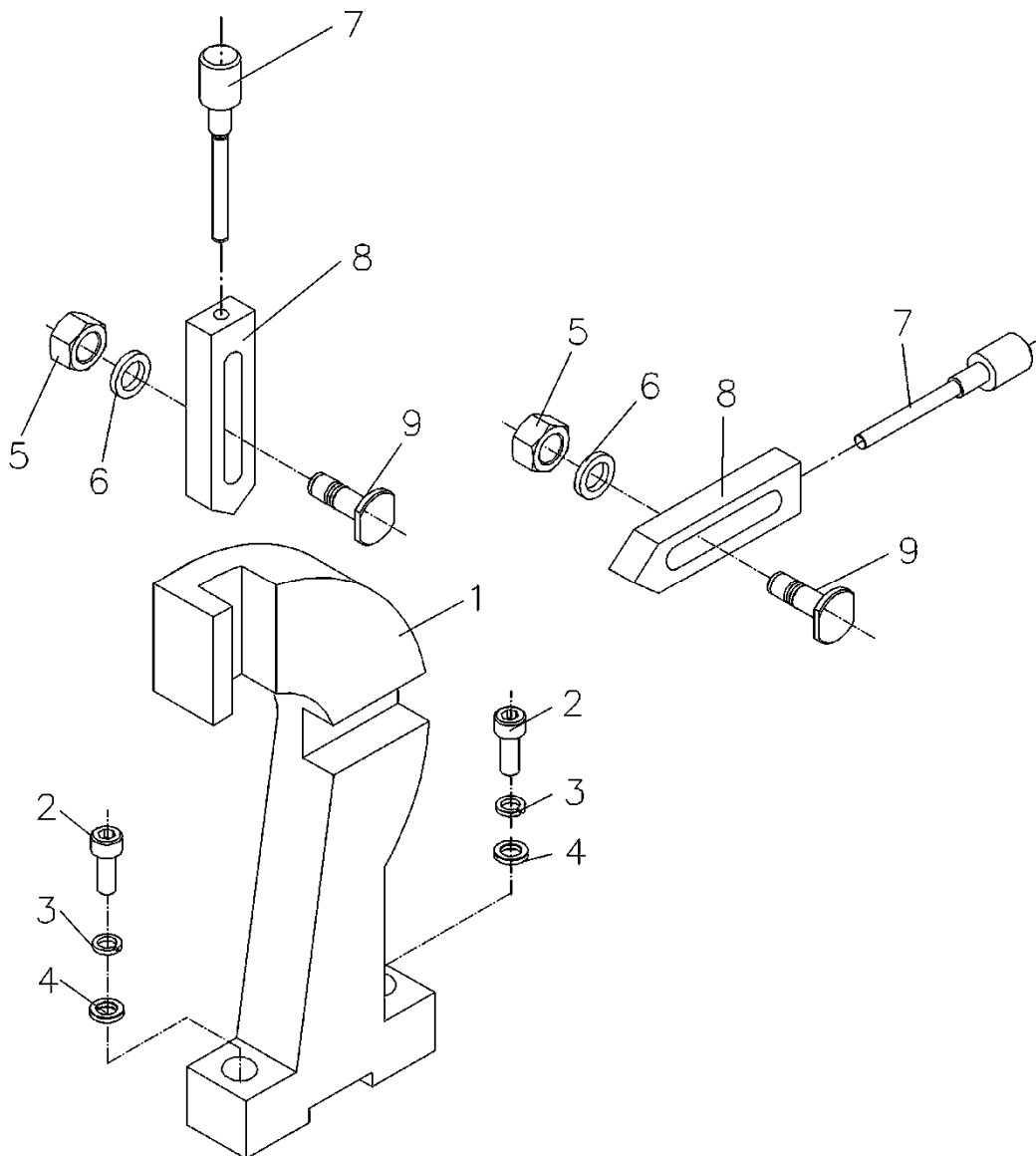
Index No.	Part No.	Description	Size	Qty
1	8009	Tailstock Ram		1
2	8008G	Lever		1
3	BD920N-HG	Handle		1
4	8001	Clamp		1
5	BD920N-T08	Guide Pin	M5x10	1
6	BD920N-T20	Oil Port	6mm	1
7	BD920N-T19	Rivet	1.5x3mm	6
8	8012	Off Set Indicator Plate		1
9	8005G	Tailstock Body		1
10	8010	Leadscrew		1
11	BD920N-CS11	Key	3x10mm	1
12	5023	Feed Spring		1
13	5022	Nut		1
14	TS-1524011	Set Screw	M8x8	1
15	BD920N-4002	Screw		1
16	4001G	Handle		1
17	8013	Handwheel		1
18	8016	Micrometer Collar		1
19	BD920N-T27	Screw	M5x6	2
20	8011	Bushing		1
21	BD920N-T26	Label		1
22	TS-1524061	Set Screw	M8x25	2
23	BD920N-T25	Label		1
24	8015G	Clamping Plate		1
25	8007	Screw	M8x100	1
26	8002G	Tailstock Base		1
27	TS-1550061	Washer	M8	1
28	8006	Nut	M8	1

14.11.1 Steady Rest Assembly – Exploded View & Parts List



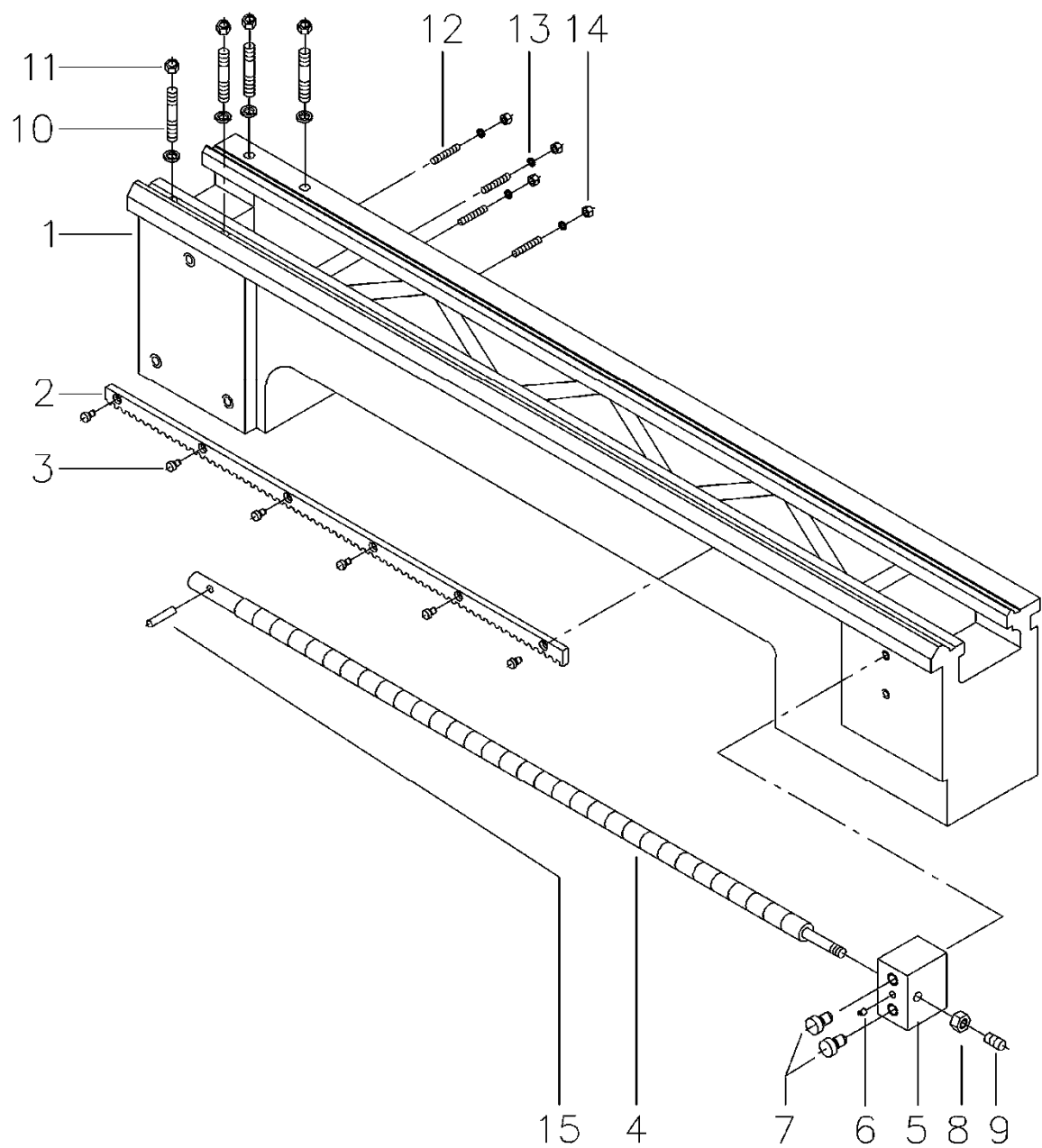
Index No.	Part No.	Description	Size	Qty
.....	BD920N-SR	Steady Rest Complete (index nos. 1-9)		1
1	F1001G	Rest Casting		1
2	TS-1540061	Nut	M8	4
3	TS-1550061	Washer	8mm	4
4	F1002	Jaw		3
5	F1004G	Adjusting Screw		3
6	F1003	Screw		3
7	F1005G	Clamping Plate		1
8	TS-1490091	Hex Cap Screw	M8x50	1
9	TS-1550061	Washer	8mm	1

14.12.1 Travel Rest Assembly – Exploded View & Parts List



Index No.	Part No.	Description	Size	Qty
.....	BD920N-FR.....	Follow Rest Assembly (index nos. 1-9)		1
1	F2001G	Rest Casting		1
2	TS-1503061	Socket Head Cap Screw.....	M6x25	2
3	TS-1551041	Lock Washer.....	6mm.....	2
4	TS-1550041	Washer	6mm.....	2
5	TS-1540061	Hex Nut.....	M8.....	2
6	TS-1551061	Washer	8mm.....	2
7	F2004G	Adjusting Screw.....		2
8	F2002	Jaw		2
9	F2003	Screw.....		2

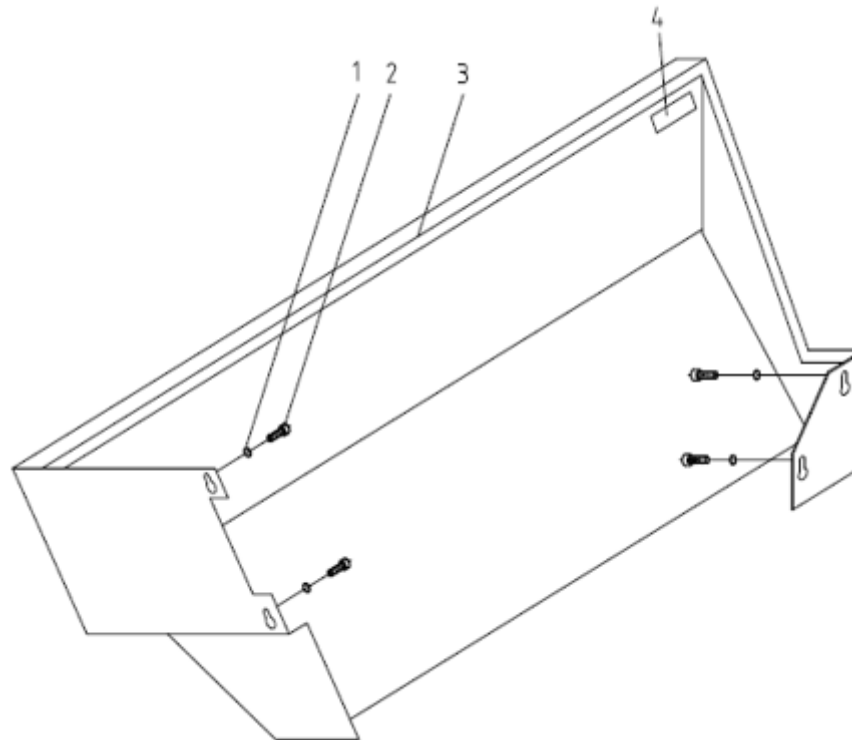
14.13.1 Lathe Bed Assembly – Exploded View



14.13.2 Lathe Bed Assembly – Parts List

Index No.	Part No.	Description	Size	Qty
1	7001G	Bed		1
2	7002	Rack		1
3	TS-1501021	Socket Head Cap Screw	M4x8	6
4	7003	Leadscrew	16TPI	1
5	7004	Bracket		1
6	BD920N-B06	Oil Port	6mm	1
7	TS-1503091	Socket Head Cap Screw	M6x40	2
8	5022	Nut		1
9	TS-1524011	Set Screw	M8x8	1
10	7005	Stud	M8x45	4
10A	TS-1550061	Flat Washer	8mm	4
10B	TS-1551061	Lock Washer	8mm	4
11	TS-1540061	Hex Nut	M8	4
12	TS-1523081	Set Screw	M6x30	4
12A	TS-1550041	Flat Washer	6mm	4
13	TS-1551041	Lock Washer	6mm	4
14	TS-1540041	Hex Nut	M6	4
15	BD920N-B15	Pin	Ø5x25mm	1
16	BD920N-B16	Label – Induction Hardened (not shown)		1
17	BD920N-B17	Rivet (not shown)		4
18	BD920W-SG	Splash Guard (not shown)		1

14.14.1 Splash Guard – Exploded View



14.14.2 Splash Guard – Parts List

Index No.	Part No.	Description	Size	Qty
1	TS-1550041	Flat Washer	M6	1
2	TS-1503021	Hex Socket Head Cap Screw	M6x10	4
3	BD920W-SGG	Splash Guard		1
4	JET-92	JET Logo	92x38mm	1

15.0 Wiring diagram

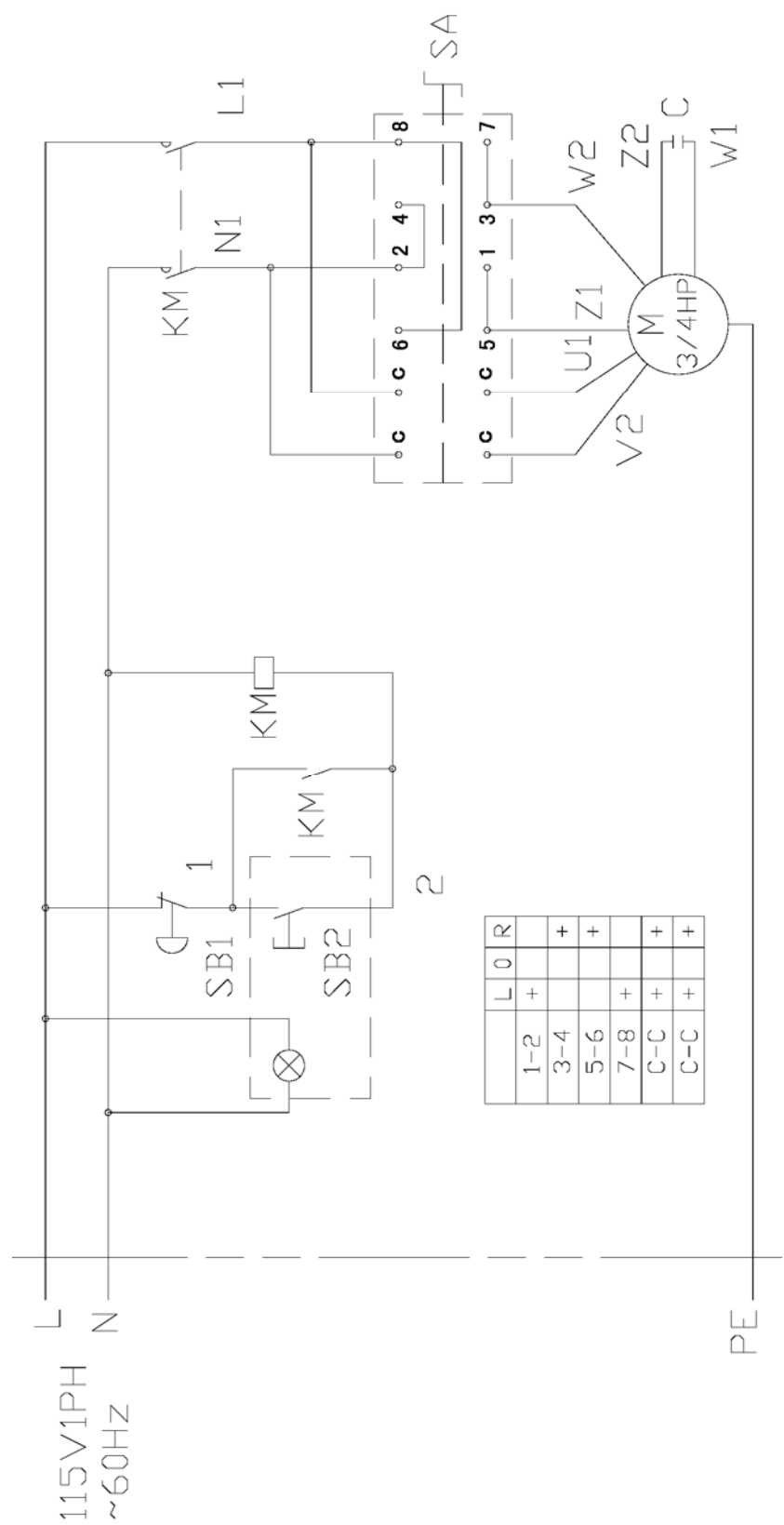


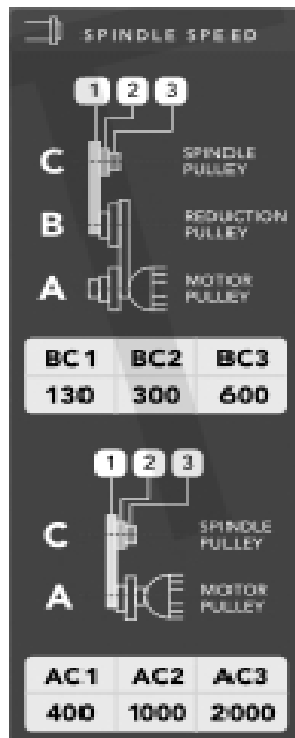
Figure 42

16.0 Speed and threading charts

These charts are also found on the headstock of the BD-920W lathe.

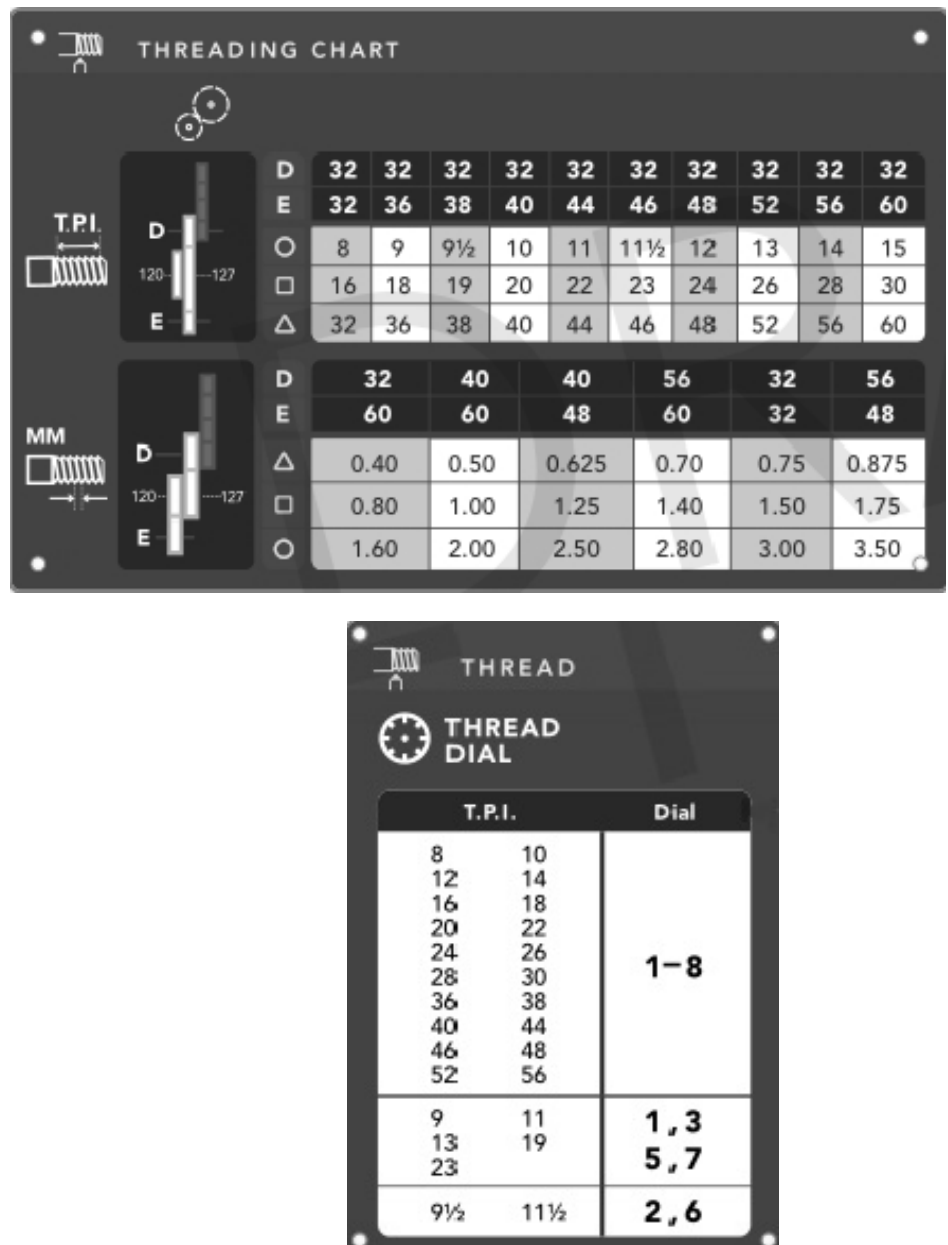
Pulley position and speeds

Figure 43



Threading

Figure 44



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